BOSTON MEDICAL LIBRARY
IN THE
FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE

Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/virginiamedicalm1017medi

OFFICIAL PUBLICATION
OF THE
MEDICAL SOCIETY
OF VIRGINIA

THE FRANCIS A. COUNT
MEDICINE
BOS
1974

Virginia Medical Monthly

August, 1974 Volume 101

THE FAIRFAX HOSPITAL
ISSUE

Both often

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in freq and/or severity of grand mal seizure require increased dosage of standarc convulsant medication; abrupt withd may be associated with temporary in crease in frequency and/or severity seizures. Advise against simultaneou gestion of alcohol and other CNS dep sants. Withdrawal symptoms (simila those with barbiturates and alcohol) occurred following abrupt discontin (convulsions, tremor, abdominal anc cle cramps, vomiting and sweating). addiction-prone individuals under ca

respond to one

THE FRANCIS A. COUNTWAY LIBRARY OF MEDICINE BOSTON

SEP 19 1974

According to her major ymptoms, she is a psychoneu- otic patient with severe nxiety. But according to the escription she gives of her elings, part of the problem ay sound like depression. his is because her problem, though primarily one of ex- essive anxiety, is often accom- anied by depressive symptom- ology. Valium (diazepam) an provide relief for both—as e excessive anxiety is re- eved, the depressive symp- oms associated with it are also ften relieved.

There are other advan- ges in using Valium for the anagement of psychoneu- otic anxiety with secondary epressive symptoms: the sychotherapeutic effect of alium is pronounced and pid. This means that im- rovement is usually apparent the patient within a few ays rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

urveillance because of their predisposi- on to habituation and dependence. In regnancy, lactation or women of child- earing age, weigh potential benefit gainst possible hazard.

recautions: If combined with other psy- hotropics or anticonvulsants, consider arefully pharmacology of agents em- loyed; drugs such as phenpthiazines, arcotics, barbiturates, MAO inhibitors nd other antidepressants may potentiate s action. Usual precautions indicated in atients severely depressed, or with latent epression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April, 1874)

PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF VIRGINIA

4205 DOVER ROAD, RICHMOND, VIRGINIA 23221

EDITORIAL BOARD

Harry J. Warthen, M.D.
Chairman and Editor

H. Lamont Pugh, M.D.

C. V. Cimmino, M.D.

John A. Owen, Jr., M.D.

Gordon W. Jones, M.D.

William H. Kaufman, M.D.

Robert Mitchell, Jr., M.D.

W. Leonard Weyl, M.D.

Fred J. Spencer, M.D.

Robert L. Cassidy, M.D.

E. Spencer Watkins
Managing Editor
4205 Dover Road
Richmond, Virginia 23221
Telephone 353-2721

Annual Subscription—$4.00
Single Copies—50¢

GUEST EDITORIAL
Fairfax Hospital Issue—*C. Barrie Cook, M.D.* 617

ORIGINAL ARTICLES
The Five Single Z-Plastics—*Albert F. Borges, M.D.* 618
Radioisotope Scintigraphy in Osteomyelitis—*C. Barrie Cook, M.D., Andrew Dobranski, M.D., A. S. Lineberger, M.D.*, and *Henry Rusk, B.S.* 625
Psychiatric Education in a Family Practice Residency—*Louis F. Rittelmeyer, Jr., M.D.*, and *Alan Mackintosh, M.D.* 629
The Advantages of Biplane Radiography in Angiography of the Aortic Arch and Brachiocephalic Vessels—*Walter J. Farrell, M.D.*, and *Larry W. Stanton, M.D.* 632
Primary Adrenal and Ovarian Failure—*Stephen H. Schachner, M.D.* 638
Pulmonary Edema Caused by Methadone—*Burton A. Johnson, M.D., A. Everette James, Jr., M.D., Myron S. Levey*, and *H. James Campbell, M.D.* 640
Eleven Gout Problems—*Paul G. Rochmis, M.D.* 645
The NBT Test in Bacterial and Non-Bacterial Pharyngitis—*Donald M. Poretz, M.D.* 653

CANCER TRENDS
Epidermoid Carcinoma of the Anus—*Gerald T. Golden, M.D.*, and *J. Shelton Horsley, III, M.D.* 661

MEDICAL GRAND ROUNDS
Diagnosis of Hemoglobinopathies 665

MENTAL HEALTH
Gilles de la Tourette Syndrome—*William J. Carroll, M.D.* 672

MEDICARE—PART B 675

WOMAN'S AUXILIARY 677

EDITORIAL
The Fairfax Hospital Issue—*Harry J. Warthen, M.D.* .. 678

NEWS 680

OBITUARY 683

The Monthly is not responsible for the opinions and statements of its contributors.
All advertisements are accepted subject to the approval of the Editorial Board.
$4.00 of membership dues is payable for one year's subscription to The Virginia Medical Monthly.

Second Class Postage paid at Richmond, Virginia.

INDEX TO ADVERTISERS—692

THE GREATEST SINGLE THREAT TO YOUR FINANCIAL STABILITY IS

Disability

NOW YOU CAN INSURE AGAINST THAT THREAT

with Disability Income Program with New Maximum Benefits

Now for a very modest premium you can have up to $2,000 a month if you are disabled and unable to practice. Actually it's $2,200 with the 10% bonus now in effect. And it's all tax-free.

other features:

- Survivor's benefit at no increase in premium
- Coverage anywhere in the world, 24 hours a day, 365 days a year
- Special low-cost plan designed for the younger doctors
- Renewable to age 75 ■ Conversion privilege to age 65
- Few exclusions—even private flying is included
- Pays in addition to any other insurance you may carry

You can receive information immediately by writing or phoning (collect) the administrator. A minute of your time now will provide you and your family an income when it's needed most.

Program administered by:

David A. Dyer & Associates
Medical Arts Building
Roanoke, Virginia 24011
Call Collect: (703) 344-5000

FRED W. HALL
Northern Representative
8924 Orange Hunt Lane
Annandale, Virginia 22003
Call: 461-8087

FRED E. HAMLIN, JR.
Associate

DAVID A. DYER & ASSOCIATES has been awarded the seal of the American Institute of Professional Association Group Insurance Administrators. Membership in this group is by invitation only.

OTHER PLANS FOR YOUR PROTECTION

****Daily In-Hospital (up to $50)***
Major Hospital Nursing
$100,000 Excess Major Medical (Lifetime Renewable)*
****High Limit Accidental Death & Dismemberment ($250,000)**
Professional Overhead Expense
****Guarantee Issue Life Insurance***
Special Income Protection*
Preferred Physicians Disability Income

Non-Cancellable and Guaranteed Renewable Disability Income

*Guarantee Issue **Available to Employees

These plans are IDEAL for INDIVIDUALS, PARTNERSHIPS and CORPORATIONS

ESTABLISHING A PROFESSIONAL CORPORATION OR INTERESTED IN A KEOGH ACT PLAN?

The Medical Society of Virginia Members' Retirement Plans Are Flexible and Innumerable

FOR INFORMATION CALL OR WRITE:

The Medical Society of Virginia
Members' Retirement Plan

Suite 503, 2425 Wilson Boulevard
ARLINGTON, VIRGINIA 22201
703/525-6700 (collect calls accepted)

Since 1880

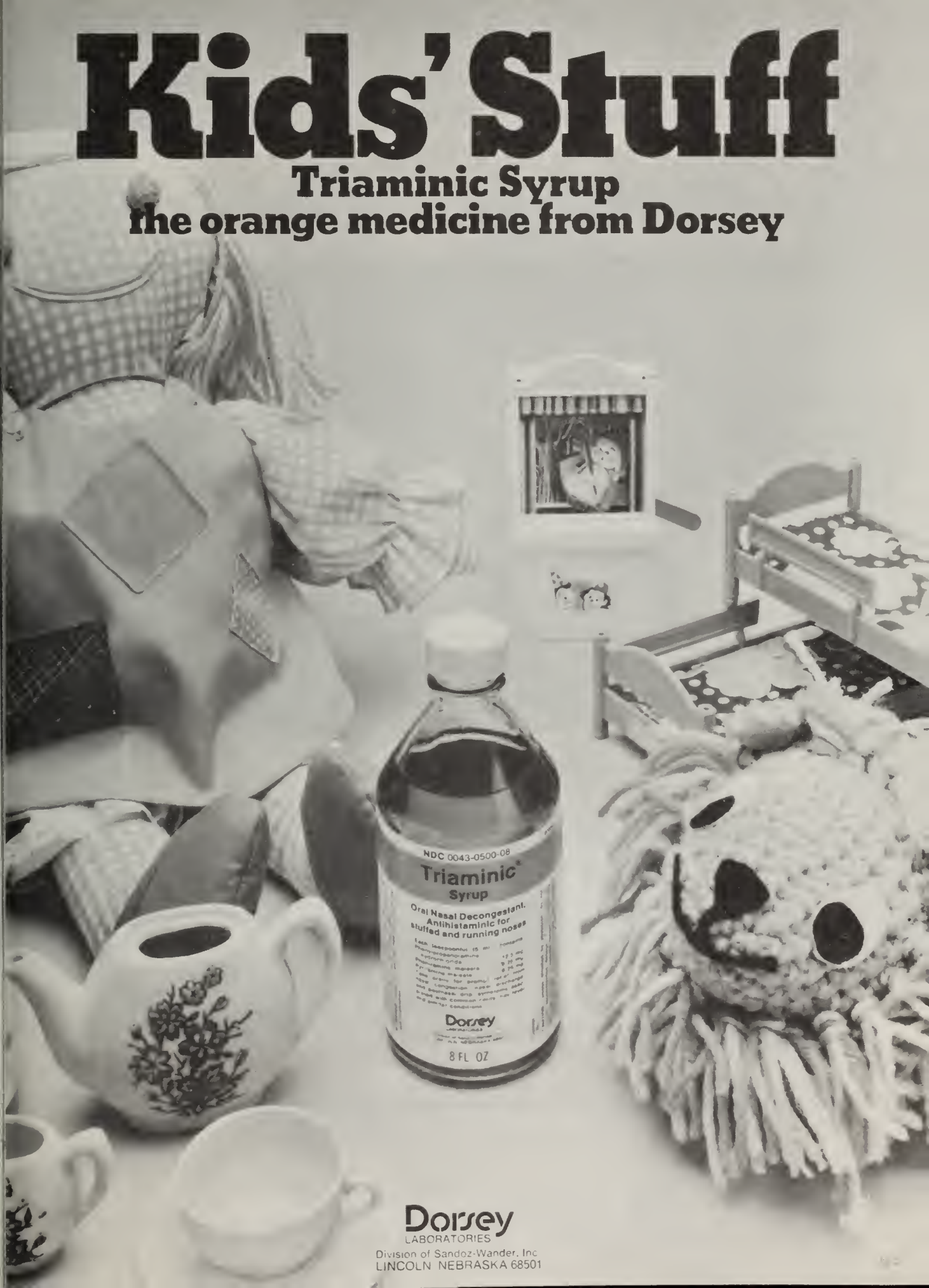
Service with Satisfaction

THE WILLIAMS PRINTING COMPANY

RICHMOND, VIRGINIA 23211

Kids' Stuff

Triaminic Syrup
the orange medicine from Dorsey



Dorsey
LABORATORIES
Division of Sandoz-Wander, Inc
LINCOLN NEBRASKA 68501

Peoples...always ready to serve your patient...with all-night prescription center drug stores.

Southside Plaza/McGuire Circle at Belt Blvd. and Hall St., Richmond	BE 2-4566
Barracks Rd. Center/Emmett St. & Barracks Rd., Charlottesville	293-9151
Ward's Corner/Gramby St. & Little Creek Rd., Norfolk	588-5421
Boulevard and Broad Sts., Richmond	359-2497
Lee Highway & Old Dominion Dr.(Arlington)	522-0011
Park and Shop Shopping Center, US #1 by-pass at College Gate stoplight, Fredericksburg, Va.	(703)373-4607
Roanoke Tower Shopping Center Roanoke, Va.	(703)342-1877

. . . and 8 other stores in the Metropolitan Washington area.

In the small hours of the evening or morning—when your patient can't wait to have his prescription filled—call the Peoples pharmacist at one of the numbers listed here. He's ready to help when it's too early for anyone else to lend a hand.

He's a good man to know. Any time.

Since 1905, Peoples has filled over 150 million prescriptions. *The next one we fill is just as important to us as all those in between.*

PEOPLES DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.

When a cough spoils your patient's day...

Triaminic® Expectorant

Each teaspoonful (5 ml.) contains:

Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg.; pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.); glyceryl guaiacolate, 100 mg.; alcohol, 5%.

Available in 8-oz. Family Size and 4-oz.
No Rx needed—recommend over the phone.

The Adult Expectorant that is great for kids, too.

Dorsey Laboratories/Division of Sandoz-Wander, Inc./Lincoln, Nebraska 68501

BS-RD

YOU CAN SEE STANMAR HOMES in Alabama, Arkansas, Colorado, Conn., Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, N. Carolina, Ohio, Pennsylvania, Rhode Island, S. Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Canada, Puerto Rico and The Virgin Islands.

the custom home that doesn't cost more

Every Stanmar home is individualized to fit your needs, your site, and your budget.

If you are planning to build a primary residence or leisure home, send $2.00 for our full color brochure, "New Directions in Home Design".

stanmar inc

Box 0-46, Sudbury, MA 01776 (617) 443-9922

ATLANTA • BOSTON • NEW YORK

Rondomycin®

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults — 600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children — 3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512

When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

Studies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

The Role of the Detail Man

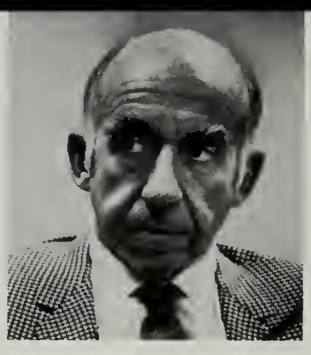
Opinion & Dialogue

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country, there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihoo on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

What does man have in common with Samson?

Neither man nor the gorilla can synthesize vitamin C. Interestingly, the slow loris, a primate much further down the evolutionary scale, can convert L-1,4-gulonolactone to ascorbic acid in its liver and presumably does not require an exogenous source of ascorbic acid.

Because man can neither synthesize vitamin C nor store most of the water soluble vitamins, these nutrients must be replenished continuously in order to maintain normal tissue levels.

Generally, this is accomplished in his daily diet. But under conditions of illness, stress, in convalescence or following surgery, vitamin stores may be depleted or metabolic demands increased.

In such cases, Surbex-T may be indicated. Surbex-T restores the water-soluble vitamins with each tablet providing 500 mg. of vitamin C plus high potency B-complex.

ABBOTT

SURBEX-T® 500 mg. of Vitamin C with High Potency B-Complex

Restores what the body cannot effectively store

403481

Oriental Rugs

My name is Amir Zinat; I am Iranian. Years ago as a graduate student in the U.S., I noticed the big difference in the price of Orientals in my homeland and here. So I asked my people to send me many rugs. I have chosen, as my business, to sell these rugs at more reasonable prices. These rugs may be exchanged, are guaranteed to increase in value, are selected by natives, and the price is fully refundable.

If you are purchasing an Oriental rug, you need to learn about them. Mistakes can be costly; so know some facts before you buy:

1. There are many rugs around which may look similar to Persian ones and may be named Iranian-sounding names to confuse you. Look for the label, "Made in Iran".
2. Even all genuine Orientals are not Persian and not necessarily what you have learned about their value and durability.
3. Stores and auctioneers often sell unauthentic or worn-out Persian rugs for far too much. A good Iranian rug is not out of reach, and if it is genuine it will hold or increase its value.
4. Do not count much on the words, Princess, Contract, Signed, Collector's Item, Royal, Imperial, Prayer, etc. They are all part of a sales pitch or gossip. Rugs are named by the village or, more often, the region of origin. The quality of the rug may vary greatly regardless of the name. So, you should judge a rug by its own individual merits, not by the name.

I would be happy to help you learn more about Orientals and assist you in any way in your selection.

Roller-type Loom

Please call **358-1711**
also recommend me to your friends
Thank you
Amir Zinat

2002½ Staples Mill Road
Richmond, Virginia

(on the back side of Cross Roads Shopping Center)

DuPont invites your consideration for:

MEDICAL SUPERVISOR

(Richmond, Va. Area)

To supervise a clinic with registered nurses. Includes administrative medical program for a large group of employees, executive and professional. Attractive salary and benefits including vacation, regular hours. Relocating expense provided.

Please write in confidence to:

Personnel Supervisor-Training
E. I. du Pont de Nemours & Co., Inc.
Film Dept.—Spruance Plant
P. O. Box 27222
Richmond, Virginia 23261

AN EQUAL OPPORTUNITY EMPLOYER M/F

For the Discriminating Eye Physician

Depend on the Services of a Guild Optician

IN LYNCHBURG, VA.

A. G. JEFFERSON

INC.

Main Office — **Allied Arts Buildings**

Branch Office — **2010 Tate Springs Road**

REGISTERED OPTICIANS

WE DO NOT PRESCRIBE GLASSES— WE MAKE THEM

'CIRCUBID'™

(Ethaverine HCl–150 mg.)

Time Disintegrating Capsules

Caution: Federal law prohibits dispensing without prescription.

Each Capsule* contains: Ethaverine HCl. 150 mg.

ACTION: Ethaverine HCl. acts directly on the smooth muscle cells without involving the autonomic nervous system or its receptors.

INDICATIONS: In peripheral and cerebral vascular insufficiency associated with arterial spasm, in spastic conditions of the gastro-intestinal and genitourinary tracts.

CONTRAINDICATIONS: Contraindicated in the presence of complete atrioventricular dissociation.

PRECAUTIONS: It should be administered with caution in patients with glaucoma. It should not be used in pregnant women or in women of childbearing age unless directed by a physician.

ADVERSE REACTIONS: Even though the incidence of side effects as reported in literature is very low, it is possible for a patient to evidence nausea, anorexia, abdominal distress, dryness of the throat, hypotension, flushing, sweating, vertigo, respiratory depression, cardiac depression, cardiac arrhythmia and headache. If these side effects occur, reduce dosage or discontinue medication.

DOSAGE: The usual adult dose is 300 mg. daily, one capsule every 12 hours. In more difficult cases the dosage may be increased to 600 mg. daily as determined by the physician. It is most effective given early in the course of the vascular disorder. Because of the chronic nature of the disease long term therapy is required.

*Manufactured to provide a prolonged therapeutic effect.

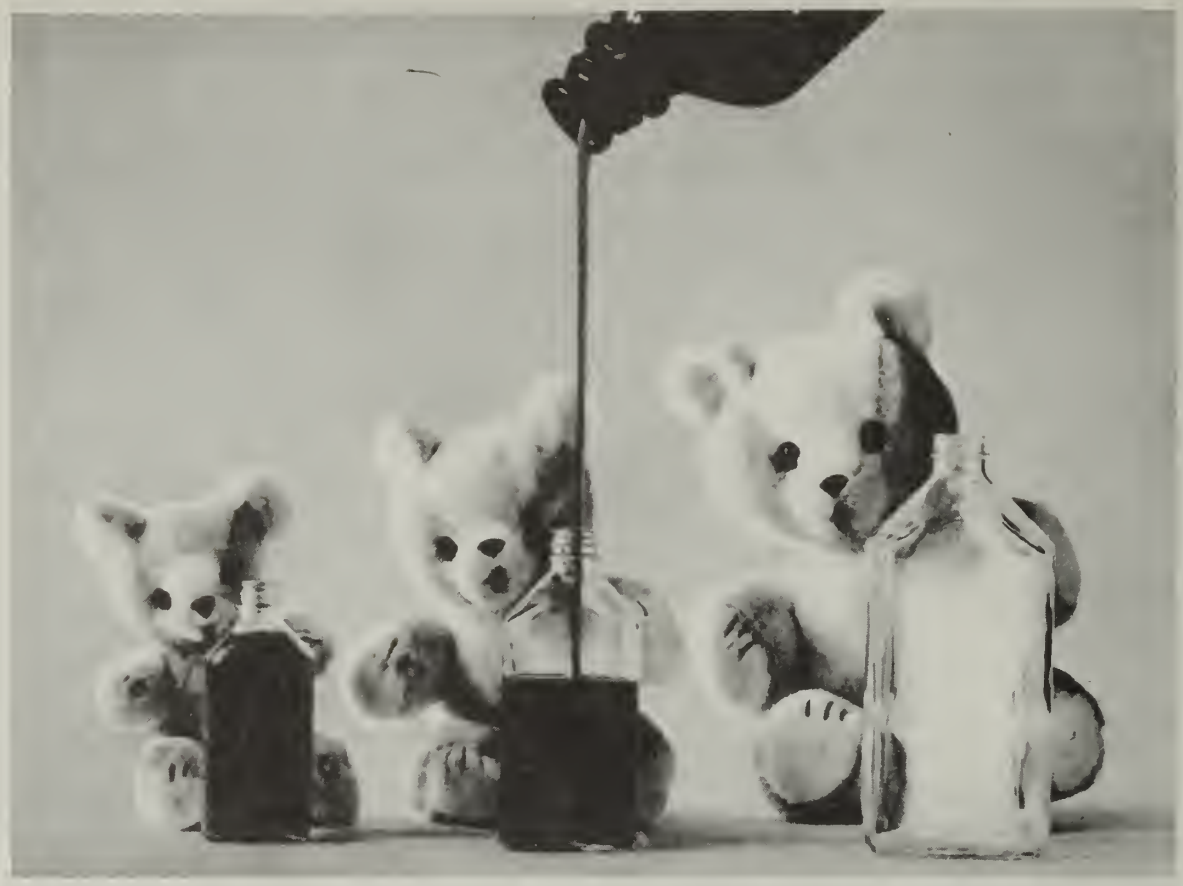
HOW SUPPLIED: Bottles of 100 and 1000

W. F. MERCHANT
PHARMACEUTICAL CO., INC.
Warrenton, Virginia 22186

"In a good old age."
—GENESIS 15:5

'CIRCUBID'™
(Ethaverine HCl)
150 mg.Capsules

W.F. MERCHANT PHARMACEUTICAL CO., INC.
4 SOUTH THIRD ST. • P. O. BOX 527 • WARRENTON, VIRGINIA 22186



Not too little, not too much... but just right!

"Just right" amounts of Ilosone Liquid 250 can be dispensed easily from the pint bottle in *any* quantity you specify to meet your patients' precise needs—without regard to package size.

ready-mixed

ILOSONE® LIQUID 250

ERYTHROMYCIN ESTOLATE

(equivalent to 250 mg. erythromycin per 5-ml. teaspoonful)

Additional information available to the profession on request.

DISTA

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46206

400054

The Virginia
MEDICAL MONTHLY

August, 1974
Vol. 101, No. 8
Whole No. 1467

Guest Editorial . . . .

WHEN I FIRST MOVED to Fairfax County in 1956 it was still a fairly rural area, especially the western two-thirds. There were approximately fifty physicians in the County Medical Society and patients needing hospitalization had to go to Arlington or Alexandria hospitals or into the District of Columbia.

This situation improved with the completion of the Northern Virginia Doctors Hospital near Seven Corners in August, 1960; however, this was still not adequate to meet the needs of our increasing population.

In February, 1961, (after five years of planning) The Fairfax Hospital was completed. Initially it was able to accommodate 284 patients. In a short time it became apparent that this was not sufficient and facilities were expanded in 1966. This resulted in no bed increase, but there was considerable enlargement in the emergency room and physical medicine facilities. In December 1969 a ten-story addition was completed bringing total beds to 616 and 47 bassinets. This made Fairfax one of the largest hospitals in the Metropolitan Washington area, and in the State of Virginia.

The hospital has teaching affiliations with Georgetown University Medical School in Medicine, Surgery, and Pediatrics; with George Washington University in OB/GYN and Urology; and with the Medical College of Virginia through its Family Practice program. In addition, there is a free standing Pathology Residency Program.

The Fairfax County Medical Society during this same time has continued to grow with its membership now totalling 410 and representing all specialties and most of the subspecialities. Society members have worked closely with the hospital administration and The Fairfax Hospital Association, which manage The Fairfax Hospital. The members are active in all areas of the hospital and have served on the hospital board.

Together they have brought to Fairfax County good medical care in an up-to-date modern hospital that is primarily dedicated to patient care, even though the training of medical students, residents, nurses, medical and x-ray technologists, nurse anesthetists, and others is also an important part of its function.

Although the physical structure of The Fairfax Hospital has changed and the membership of the County Medical Society has increased the commitment of both remains first and foremost—good patient care.

With this edition of The Virginia Medical Monthly—which is dedicated to the hospital and the County Medical Society—we feel that both have come of age and greater things will be heard from them.

C. Barrie Cook, M.D.

The Five Single Z-Plastics

ALBERT F. BORGES, M.D.
Fairfax, Virginia

The development of Z-plastics can be traced to ancient times. The history of these important plastic surgery techniques is given in this interesting account. There are also biographical notes on some of the men involved.

WILLIAM EDMONDS HORNER, a native Virginian, deserves the credit for the first description of a Z-plastic technique, published in 1837. In 1904, Paul Berger presented the first true Z-plasty, which was subsequently popularized by Stewart McCurdy, chairman section on stomatology of the American Medical Association (1910-1912).

Historical searches for the original Z-plasty have resulted in much confusion, part of it stemming from the view that all Z-plastic techniques are Z-plasties.[1-4] Today, however, most plastic surgeons consider that a Z-plasty is only that Z-incision operation in which two juxtaposed triangular flaps are raised and transposed into each other's skin defect;[5-7] a technique does not qualify as a Z-plasty merely because it has the shape of the letter Z. Z-shaped techniques other than Z-plasties, which are referred to as "Z-plastics", differ in the movement or lack of movement of the flaps formed by the zigzag incision. Five such techniques have been devised.

Because of racial strife in ancient India, mutilated noses were common, and Hindu surgeons became skilled at restoring them. Among their methods was one in which the lost portions of the nose were built up by transplanting pedunculated flaps of skin from the adjoining cheeks. Thus, centuries later, when the same procedure was applied to plastic surgery of the lids, it was called the Indian method.[8]

The procedure was systematized and given its first real impetus by Fricke in 1829.[9] In cases of complete cicatricial ectropion of the upper lid, he made an incision parallel with the rim of the orbit, loosened the tarsus from its attachments, and turned it down into place, leaving an oval raw surface (Fig. 1). A flap was cut from the forehead and temple, with the base of the flap situated a little external to the margin of the orbit and slightly above the operated lid. Before turning the flap into its new position, the bridge of skin between the two raw areas was excised enough to receive the base. The flap was held in place by sutures, and the gap from whence it came was left to heal by granulation. Fricke's incisions were not Z-shaped, and so his procedure cannot be called a Z-plastic. However, it undoubtedly was the source of inspiration for many Z-shaped blepharoplasties.

Fig. 1. Fricke's single transposition oval-shaped flap (1829). Donor area was left to heal by granulation.

Unfortunately for chronologically and evolution-minded historians, the five Z-plastics did not develop in an orderly progression from simple to more complex. (see Table I). Nevertheless, for ease in understanding, they will be presented here in that order, with biographical notes on some of the men who played a prominent part in their origin.

Based on a paper presented at the Annual Meeting of the Southeastern Society of Plastic and Reconstructive Surgeons, May 14, 1973, Ft. Lauderdale, Florida.

TABLE I.

CHRONOLOGICAL DEVELOPMENT OF Z-PLASTIC TECHNIQUES

800 B.C. Hindu surgeons were skilled in skin shifting.
1829 Fricke published his single transposition flap and allowed the donor area to heal by secondary intention.
1837 Horner described the first Z-plastic in which a flap was transposed and the other allowed to slide to cover defect.
1854 Denonvilliers presented his single transposition flap with closure of defect by relocation of eyelid commissure.
1856 Denonvilliers presented the single flap blepharoplasty similar to that of Fricke but with the shape of a Z.
1898 McCurdy published his double sliding flaps Z-plastic.
1904 Berger published the first double transposition flaps Z-plastic or true Z-plasty. McCurdy presented a Z-plastic technique with segments similar to a true Z-plasty but raised and transposed only one of the flaps.
1913 McCurdy called the Z-incision techniques "Z-plastic surgery".
1914 Morestin described the first multiple Z-plastic.

1. *Single Flap Transposition Z-plastic*

This Z-plastic consists of a Z-shaped incision delimiting two triangular segments of skin. One is raised and transposed, and the other remains stationary. In other words, the Z is composed of a V-incision that is used to make a flap which is raised and another single incision to create the skin defect into which the flap is transposed (Fig. 2). The donor area is left to heal by secondary intention.

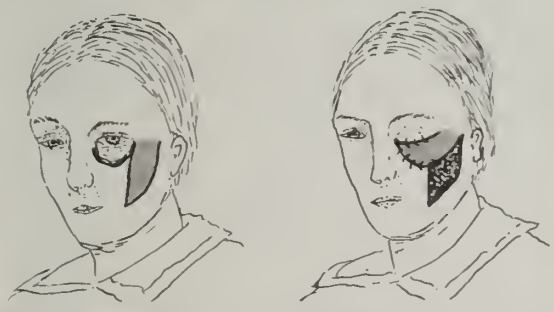


Fig. 2. Denonvilliers' single transposition Z-plastic (1856). Donor area was not closed.

Denonvilliers' blepharoplasty, which he described in 1856,[10] is an example of this Z-plastic. Although it is the simplest Z-plastic, he had previously described a more complex technique,[11] and so had Horner, back in 1837.[12] (Fig. 4)

2. *Single Flap Transposition and Single Relocation Flap Z-plastic*

An example of this Z-plastic is the blepharoplasty to correct scar contracture described by Denonvilliers in 1854,[11] which until recently was assumed to be the first Z-plastic [1, 2, 13] (Fig. 3).

Fig. 3. Denonvilliers' single transposition Z-plastic (1854). Relocation of distorted eyelid commissure closed donor area.

It consists in making a Z-shaped incision that creates two triangular flaps. One is superior and is undermined, raised, and transposed; the other is inferior and is *not* undermined nor raised but allowed to return to its original site,

Dr. Charles Pierre Denonvilliers (1808-1872). (Courtesy of the National Library of Medicine, Bethesda, Maryland.)

Charles Pierre Denonvilliers was born in Paris in 1808. He received his doctoral degree from the University of Paris in 1837. He became a well known anatomist and surgeon, excelling in plastic surgery. In 1843 he was one of the Founders of the Société de Chirurgie de Paris and served as its President. He was co-author of two books: 1. with Gerard and Gosselin, *Compendium de Chirurgie Pratique;* 2. with Gosselin, *Traité Theorique et Pratique des Maladies des Yeux.* He succumbed to a cerebral stroke in 1872.

from which it has been deflected by the scar. The donor area is closed by direct approximation through stretching of the remaining integuments of the upper eyelid and forehead.

3. *Single Flap Transposition* and *Single Flap Sliding* Z-*plastic*

This Z-plastic resembles the previous two techniques in that only one triangular flap is undermined, raised, and transposed. It differs in that the flap that is not undermined or raised is allowed to shift from its original place by sliding, similar to the back cuts of rotation flaps. This movement resembles the French sliding flap more than the Indian rotation flap. It is the oldest known Z-plastic and was described by William Horner in 1837.[12] The operation was performed on a 42-year-old laborer who had an ectropion of the lower right eyelid caused by scarring from a burn four years before. Horner described the procedure as follows:

> The whole of the tarsus cartilage was permanently everted by the shortening of the contiguous skin when the part healed. The conjunctiva of the lid was exposed nearly half an inch in breadth, was highly inflamed, ulcerated, with scabs on it, and much thickened. . . . The loss of substance, and the ectropium depending on it, was successfully treated by the following plan: An incision, two inches in length and down to the bone, was made parallel with and at the inferior margin of the orbicularis muscle. The whole thickness of the eyelid was then dissected up from the adjoining bones. From about the middle of that incision started another, of an inch in length, downwards towards the angle of the jaw. From the termination of the latter another incision of the same length was directed towards the root of the nose. The two last incisions consequently defined an angle of integuments, which, being dissected up as far as its base, was then turned into the beginning of the first incision. The following diagram (Fig. 4) will illustrate the operation.

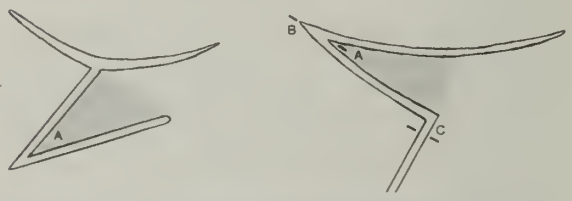


Fig. 4. Horner's single transposition Z-plastic (1837). Donor area was closed by cheek tissue pulled upward by the transposed flap "A" and by sliding the other flap downward.

The angle A, taken from the cheek was inserted into the lower eyelid, and a pin fixed at B and another at C, so as to keep

Dr. William E. Horner (1790-1853), who in 1837 described the first Z-plastic. (Courtesy of the National Library of Medicine, Bethesda, Maryland.)

William Edmonds Horner was born June 3, 1793, in Warrenton, Fauquier County, Virginia.[14,15] His father, a merchant, was named a trustee in the 1810 act chartering the town of Warrenton, formerly called Fauquier Court House.[16] Horner attended school in Warrenton and later in Dumfries, Prince William County, where in 1809 he began the study of medicine under Dr. John Spence. After completing his medical education at the University of Pennsylvania he served as surgeon in the United States Army until the end of the War of 1812. He practiced briefly in Warrenton and then, in 1816, was given an appointment as dissector by Caspar Wistar, who at that time was professor of anatomy of the University of Pennsylvania. In 1819, Horner was made adjunct professor of anatomy and in 1822, at the age of 29, became dean of the medical school, a post he held for 30 years. In 1824, Horner, who was an excellent anatomist, capable of making the most minute dissections, described the pars lacrimalis of the orbicularis muscle, now called Horner's muscle in almost all anatomic description of the orbit and regarded by physiologists as having the special function of facilitating the excretion of tears, as Horner himself had noted.[17] From 1831 to his death in 1853, Horner held the Chair of Anatomy at the University of Pennsylvania Medical School. A prolific writer, he published a number of books on anatomy and pathology and contributed numerous articles to various medical journals, especially to the American Journal of the Medical Sciences, published in Philadelphia. He bequeathed his collection of anatomical preparations to the University of Pennsylvania to form the Wistar and Horner Museum, which subsequently became the Wistar Institute of Anatomy.

the parts in place. An almost immediate correction of the deformity ensued. . . This may be considered as one of the numerous illustrations now in progress of the value of looking to contiguous sound parts to supply the losses from disease or accident; a practice which, beginning with the nose, at a very remote period on the banks of the Ganges, has been variously modified to suit different organs, according to their respective exigencies.

4. *Double Sliding Flaps Z-plastic*

In this technique, first described by the Pittsburgh surgeon, Stewart McCurdy, in 1898,[18] the two flaps created by the Z-incision are allowed to shift places by sliding. Little by little, McCurdy modified the technique until he had arrived at what we know today as a true Z-plasty. In reading McCurdy's papers, it is most interesting to note how the Z-plasty evolved in his mind from his original double sliding flaps Z-plastic, although he was totally unaware of Berger's 1904 article describing the typical Z-plasty.

(In dealing with the treatment of cicatrices resulting from burns) the prime object is to preserve tissue. In no instance should any portion of the cicatricial band be removed. The bands should be so severed as to permit their sliding upon themselves, or they should be permitted to gap where a skin flap can be adjusted.

For bands across joints (e.g. elbow, neck or fingers) the author makes an incision along the crest of the band from end to end. Care being taken (when separating) the two layers. Cuts are made at both ends of the first (incision), but on opposite sides back to the edges of the cicatrix, as shown in (Fig. 5A). The angles of the flaps thus made are dissected back for a short distance. As the joint is extended, traction is made on the skin at the ends and a condition as shown in (Fig. 5B) results, and as result of further traction, conditions are shown in (Fig. 5C). The margins of the flaps made by the longitudinal cut, slide upon each other while the end incisions are almost obliterated by the extension. The flaps are liberated as may be necessary to permit complete extension. The edges of the skin, or cicatricial tissue as it may be, are brought together and sutured, (Fig. 5D). This may not be possible near the ends, but in the center it is usually not difficult. The advantage in this method of operation is that it furnishes covering for the central portion of the cicatrix where it is most needed, and if an uncovered portion is left it is near the ends where flaps from neighboring healthy tissues may be switched about to cover them.

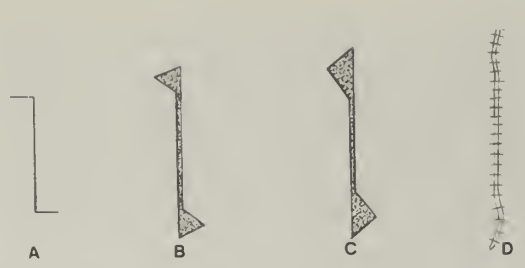


Fig. 5. McCurdy's double sliding flap Z-plastic (1898).

In 1904, McCurdy[19] published again his Z-plastic technique in a medical journal with the same wording as in his 1898 book, but modified the drawing by enlarging the size of the limbs of the Z (Fig. 6). In the same article he also presented what he called a "modified Z incision", which had longer limbs, of the same size as the diagonal, and in which one of the flaps was raised and transposed and the other moved by sliding. He added an extra incision and explained the technique as follows (italics added):

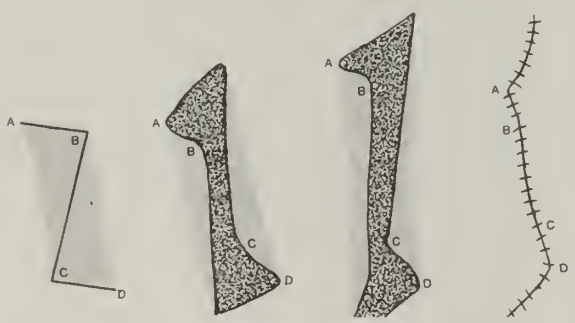


Fig. 6. McCurdy's double sliding flap Z-plastic (1904). Notice how in later years he increased the length of the limbs in relation to that of the diagonal.

(Fig. 7 illustrates) an operation recently performed to relieve the contraction of a scar resulting from a burn that drew the chin quite close to the clavicle. The result was (most) satisfactory. It will be seen that *the usual* Z *incision* (Flaps A and B) was made and then a second incision from the apex of the lower angle, as shown in (by X). This permitted more freedom with the flaps, allowing the angular flap (B) to be switched directly across the neck at right angles to the original deforming band, as shown.

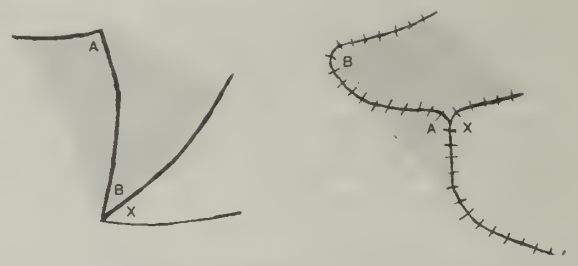


Fig. 7. McCurdy's modified Z-incision (1904). In this modification one of the flaps is now completely transposed.

In a 1913 paper[20] he first used the term Z-plastic surgery in the title; in the text he called the technique, the Z-method or the Z-operation. The paper described a case in which he had performed a Z-shaped double transposition flap or typical Z-plasty. (Fig. 8)

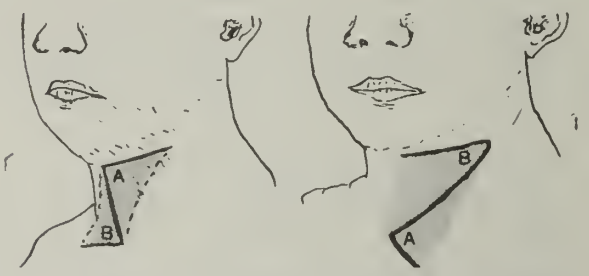


Fig. 8. McCurdy's Z-plasty, or double flap transposition Z-plastic (1913).

The Z-line shows the incisions. After these were made, flaps A and B were dissected loose back of the dotted lines. The second step in the operation is to take the flap B and switch it over into the space left underneath the mandible on the left side, after dissecting loose flap A. Flap A is drawn downward and below flap B and sutured in its new position. It will be observed that originally flap A was attached to the symphysis but finally was sutured to the skin immediately over the sternum; and that the angle of flap B, originally attached to the skin immediately over the sternum, was shifted so as to be sutured to the skin immediately under the left angle of the mandible.

McCurdy's numerous articles on the subject of Z-plastic techniques[18-23] created the impression among many surgeons that he was the first to describe it. Hunt[24] in 1926 give full credit

to McCurdy for what he called the "Z-plastic method". In 1937, Ivy[25] commented favorably about "McCurdy's transposition flaps", and Dingman in 1955[6] expressed the view that McCurdy was probably the first in this country to call attention specifically to the use of Z-plasty. McCurdy himself thought that he was the originator of the Z-plasty: "It occurred to me that the ideal method of treatment would be to implant in the center of the wound normal skin and to shift the burn scar to the ends of the field of operation. This method of operating was finally developed so that a perfect Z-incision is made . . . ."[22] Ivy, in a letter to the author said ". . . you may quote me as fully believing, from personal conversations with him and study of his publications on the subject, that Stewart McCurdy regarded himself as the originator of the Z-plasty."

The first multiple Z-plastic described by Morestin in 1914[26] used the sliding flaps technique. The flaps created by his incisions were allowed to shift in place without true undermining and raising; they merely were permitted to slide. This multiple sliding Z-plastic eventually developed into the multiple Z-plasty Z-plastic as is used today.

Stewart Leroy McCurdy, was born July 15, 1859, in Bowerstown, Ohio, and was graduated from Columbus Medical College in 1881. In 1894 he received another medical degree from Ohio Medical University, where he had been appointed professor of orthopedic and clinical surgery after three years in general practice. He had received his special training in orthopedic surgery at the Vanderbilt Clinic and at the Institute for Ruptured and Crippled in New York. He subsequently moved to Pittsburgh, where he practiced orthopedic surgery and, in 1896, organized the dental department of the University of Pittsburgh and was named professor of anatomy and of oral and general surgery in that department. He was appointed chairman section on stomatology in the American Medical Association (1910-1912). From 1921 to 1930, he was associate professor of surgery at the University of Pittsburgh.

Dr. McCurdy was a Fellow of the American College of Surgeons and became a member of the American Association of Oral and Plastic Surgeons in 1924. His versatility was evident in his publications in the fields of orthopedics, oral surgery, and anatomy.

Dr. Stewart Leroy McCurdy (1859-1931) at the age of 50.

5. *Double Flap Transposition Z-plastic, or true Z-plasty*

The first double flap transposition Z-plastic was described by Berger in 1904.[28] It was used to correct axillary burn synechia, and he called it "autoplasty by dividing the web into two and interchanging the flaps". In his Z-procedure, the diagonal fell over the crest of the scar and delineated two juxtaposed triangular flaps, which were transposed into each other's original bed (Fig. 9). Apparently, Berger's Z-plasty evolved from his attempts, and those of other contemporary surgeons, to cover with two triangular local flaps of tissue the raw area created by the surgical separation of brachiothoracic scar synechia, one flap being based on the anterior surface of the chest and the other

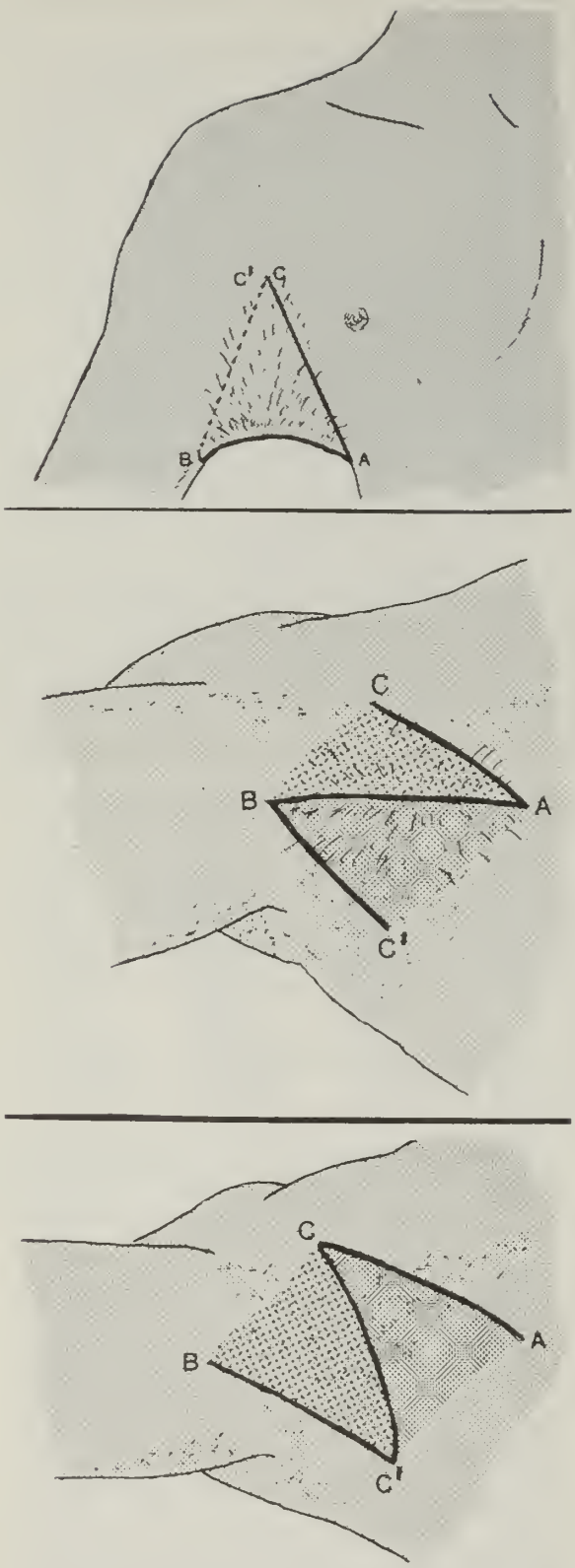


Fig. 9. The first typical Z-plasty, described by Berger in 1904.

on the back. The techniques of McCurdy,[18] Defontaine,[29] and Piechaud[30] are earlier examples, and so is another one presented by Berger[31] himself in 1887.

Dr. Paul Berger (1845-1918). (Courtesy of the National Library of Medicine, Bethesda, Maryland.)

Born in Beaucourt, France, on January 6, 1845, Dr. Paul Berger began the study of medicine under Gosselin in 1867. In 1875, two years after completing his thesis in medicine, he became professor at the Faculté de Médecine in Paris, and was made a member of the Académie de Médecine in 1892. As a surgeon at the hôpital de Beaujon, he excelled in operations on the face, neck and extremities and was also well known for his operations on hernias. He contributed articles to the *Revue des sciences médicales, Archives générales de médecine, La France médicale* (of which he was director from 1873 to 1878), the *Revue de chirurgie* (of which he was also a director), the *Dictionnaire encyclopédique*, and the *Exposé des titres* et *des travaux scientifiques* (1894). He described the first typical Z-plasty in a book of orthopedic surgery which he co-authored with S. Banzet. On October 9, 1908, he died of a stroke while performing a herniorrhaphy.

A full list of references may be obtained from the author.

Seven Corners Medical Building
Falls Church, Virginia 22044

Radioisotope Scintigraphy in Osteomyelitis

C. BARRIE COOK, M.D.
ANDREW DOBRANSKI, M.D.
A. S. LINEBERGER, M.D.
HENRY RUSK, B.S., N.M.T.
Falls Church, Virginia

Scintiscans are positive where there is increased bone growth or blood flow and are not specific for osteomyelitis. They are, however, of considerable aid in the early diagnosis and management of osteomyelitis, being positive 3-6 weeks prior to radiographic changes.

THE USEFULNESS OF RADIOACTIVE AGENTS in diagnosing bone lesions has been recognized for some years. In 1942, Treadwell, et al[1] reported metabolic studies in various bone tumors using radioactive ^{89}Sr. Since that time, other radioactive agents have been used, such as ^{67}Ga[2], ^{47}Ca and ^{85}Sr[3]. The physical and biological properties of these agents generally do not justify their use in benign conditions. It was not until the properties of ^{18}F were reported[4] that bone scanning became a more routine procedure. Its very short half life and relatively low energy gamma ray permit its use in a wider range of disease processes. This is also true of ^{78m}Sr. However, the short half lives of both agents as well as the fact that both are produced in the cycletron make them difficult to obtain routinely. It was not until Subramanian and McAfee[6] reported on the use of ^{99m}Tc compounds that bone scanning became a routine procedure.

Scintiscans are known to be positive 3-6 weeks prior to radiographic changes in such conditions as osteomyelitis and metastatic cancer. Nonmalignant bone and joint disease of various types have been successfully scanned and reported by many authors[7,8,9,10 & 11]. In 1966 DeNardo[12] and others[13 & 14] noted the usefulness of bone scanning in osteomyelitis. The insidiousness and difficulty of diagnosis of this disease is well known and deserves attention. Now that many institutions have radioisotope equipment as well as a suitable agent for bone scanning, we feel it would be of value to emphasize their benefit in diagnosing osteomyelitis early in its course. This would facilitate the prompt treatment and hopefully resolution of the process.

The equipment routinely used in our institution for bone scanning is a Picker Dynacamera, Model 2C, with either a Polaroid or 70mm camera attachment for reproducing the oscilloscope images. In the past we have used a 5 inch Picker Magna-scanner V, with appropriate collimation depending on the nuclide used. At the present time we are using technetium labeled diphosphonate, although in the past we have used technetium labeled polyphosphate, ^{87m}Sr, and ^{18}F. Because of its ease of preparation, availability, and good resolution we have settled on this technetium labeled compound over the other agents.

The following are reports of three cases to illustrate the usefulness of radioisotope scintigraphy in the diagnosis of osteomyelitis.

Case Reports

Case #1: A five year old white male developed pain in the left leg approximately five days prior to admission. There was associated fever and difficulty in walking. The fever responded well to aspirin, but there was gradual worsening of overall symptomatology. At admission

the left knee was painful and swollen, but no redness was noted. There was stiffness of the left leg and tenderness in the medial suprapatellar region. Blood cultures were positive for coagulase positive hemolytic staphylococcus aureus. X-rays of the left knee on three occasions between 1-26-73 and 2-8-73 were normal and a bone scan on 1-29-73 was abnormal (Fig. 1). The patient responded well to appropriate antibiotic therapy and was discharged 15 days following admission.

Fig. 1. These photographs reveal a normal x-ray of the pelvis while the scan shows increased activity in the right femoral head.

Case #2: This 14 year old white male was admitted with a history of trauma to the right knee and subsequently developed pain in the right leg. X-rays at that time were normal. Symptoms continued and he was admitted to the hospital approximately three weeks later with continuing pain in the right hip and thigh. He was febrile and blood cultures drawn shortly after admission were positive for coagulase positive hemolytic Staphylococcus aureus. Bone scans on 9-2-71 were abnormal, while repeat x-rays were negative (Fig. 2). Appropriate treatment was instituted and he was discharged 32 days after admission.

Fig. 2. This is a comparison of the normal radiograph taken 2-8-73 and the scintiscan of 1-29-73 showing increased activity in the left tibial head and upper tibial shaft.

Case #3: A 55 year old white male presented with the past history of a gunshot wound of the left leg in 1945 complicated by osteomyelitis. A bone graft of this area had been performed in 1960. Several months prior to this admission he developed pain of left knee following slight trauma. This continued and gradually worsened until three days prior to admission when he developed some limitation of motion of the left knee. The patient was febrile, but three blood cultures were negative while a subsequent culture of the knee fluid on 9-10-73 was positive for Proteus species. X-rays on 9-4-73 revealed osteoarthritis and old osteomyelitis, but no acute process, while the bone scan reported increased activity in the tibial head and shaft (Fig. 3). He responded to antibiotic therapy and was discharged 32 days after admission, but was readmitted four months later for a recurrence of the same process.

Discussion

The easy availability of nuclear medicine procedures makes their use in the early diagnosis of osteomyelitis a distinct asset to the overall management of a given patient. The metabolic activity of the various radioactive

Fig. 3. X-ray of knee showing old osteomyelitis with no acute process. Scan done at same time was abnormal, with increased activity, left tibia head, suggesting osteoblastic activity and/or increased blood flow consistent with active process.

agents mentioned above is such that they are deposited in areas of osteoblastic activity. For this reason they are usually found in epiphyseal lines as well as other areas of active bone growth. In addition, in osteomyelitis there is a generalized increase of blood flow to the area which also accounts for some of the increased activity. The regular utilization of these agents has made the normal distribution pattern well known and irregularities are easily recognized. The justified concern over radiation exposure prevented the use of radioactive agents for diagnostic purposes in nonmalignant conditions until relatively recently. However, since the development and availability of the newer short-lived nuclides the radiation exposure has lessened to an acceptable degree and permits their use not only in adults for nonmalignant conditions but also in children. Table 1 from an article by Castronovo and Callahan[15] shows the dose calculations of technetium diphosphonate.

Positive or abnormal scans are obtained where there is increased bone growth or blood flow, regardless of the etiology. Therefore,

TABLE 1. DOSE CALCULATIONS OF ^{99m}Tc-HEDSPA*

Organ	HEDSPA (rads/ mCi)	87mSr rads (1 mCi)	18F (rads/ mCi)	85Sr rads (0.1 mCi)
Whole body	0.011	0.02	0.05	1.3
Whole body + sk°	0.098	-	-	-
Whole body + sk + Bl°°	0.114	-	-	-
Skeletal	0.045	0.16	0.29	5.5
Bone marrow	0.01	0.02	0.04	-
Kidneys	0.006	-	-	-
Kidneys + Bl"	0.012	-	-	-
Bladder**	0.49	-	-	-
Bladder°*	0.07	-	-	-
Male gonads	0.114	-	-	-
Female gonads	0.134	-	-	-

* Assume 50% of administered dose to be concentrated in skeletal system.

° Whole body dose + skeletal contribution.

°°Whole body dose + skeletal contribution + bladder contribution.

" Kidney + bladder contribution.

**50% of dose, $T_{1/2}$ eff-6 hr - worst possible case.

°*Bladder dose, patient voids 1 hr after administration.

scanning is not specific for osteomyelitis. In spite of this limitation it is felt to be a valuable atraumatic modality which should be considered in diagnosing suspected cases of osteomyelitis.

Summary

Three cases of osteomyelitis are presented in which the usefulness of radioisotope scanning was felt to give considerable aid in early diagnosis and management. With the ready availability of these procedures and in view of the delay in x-ray findings we would encourage their use.

ACKNOWLEDGMENTS:

To Mrs. Peggy Cusimano for typing the manuscript and to Mr. Charles Powell for the photography.

Bibliography

1. Treadwell, A. DeG., Low-Beer, B.V.A., Friedell, H.L., Lawrence, J.H.: Metabolic Studies on Neoplasm of Bone with Aid of Radioactive Strontium. Am. J. Med. Sci. 204:521-530, 1942.
2. Mulry, W.C., Dudley, H.C.: Studies of Radiogallium as a Diagnostic Agent in

Bone Tumors. J. Lab. Clin. Med. 37:239-252, 1951.
3. Baur, G. Ch., Wendeberg, B.: External Counting of Ca^{47} and Sr^{85} in Studies of Localized Skeletal Lesions in Man. J. Bone Joint Surg. 41B:558-580, 1959.
4. Blau, M. Nagler, W., Bender, M.A.: Fluorine^{18}: A New Isotope for Bone Scanning. J. Nucl. Med. 3:332, 1962.
5. Myers, W.G.: Radiostrontium-87m, Abstracted. J. Nucl. Med. 1:124, 1960.
6. Subramanian, G., McAfee, J.G.: A New Complex of ^{99m}Tc for Skeletal Imaging. Radiology. 99:192-196, 1972.
7. French, R.J., McCready, V.R.: The Use of ^{18}F for Bone Scanning: Br. J. Radiol. 40:655-661, 1967.
8. Moon, N.F., Dworkin, H.J., LaFluer, P.D.: The Clinical Use of Sodium Fluoride ^{18}F in Bone Photoscanning. JAMA. 204:974, 1968.
9. Shuler, S.E., April, C.N., Weiss, T.E.: Peripheral Joint Imaging. Am. J. Dis. Child. 124:673-679, 1972.
10. Myers, W.G., Olejar, M.: Radiostrontium 87-m in Studies of Healing Bone Fracture. J. Nucl. Med. 4:202, 1963.
11. Ilingworth, G.I., Schiess, F.A.: ^{87m}Sr in the Prognosis of Fractures of the Tibia. Proc. Roy. Soc. Med. 64:633, 1971.
12. DeNardo, G.L.: The Sr^{85} Scintiscan in Bone Disease. Ann. Int. Med. 65:44-53, 1966.
13. Waxman, A.D., Bryan, D., Siemsen, J.K.: Bone Scanning the Drug Abuse Patient: Early Detection of Hematogenous Osteomyelitis. J. Nucl. Med. 14:647-650, 1973.
14. Staheli, L.T., Nelp, W.B., Marty, R.: Strontium 87m Scanning: Early Diagnosis of Bone and Joint Infections in Children. JAMA. 221:1159-1160.
15. Castronovo, F.P., Callahan, R.J.: New Bone Scanning Agent: ^{99m}Tc Labeled 1-Hydroxy-Ethylident-1, 1 Disodium Phosphonate. J. Nucl. Med. 13:823-827, 1972.

Fairfax Hospital
Falls Church, Virginia 22046

Clinical Center Study of Patients With Neuroblastoma

The cooperation of physicians is requested in the referral of patients with neuroblastoma for study and treatment by the Pediatric Oncology Branch of the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients 2 years old or greater with metastatic disease are needed for this study. Previously untreated patients are preferred; however, previously treated patients will also be considered for admission.

Physicians interested in having their patients considered for admission may write or telephone: David G. Poplack, M.D., Pediatric Oncology Branch, The Clinical Center, Room 3B14, National Cancer Institute, Bethesda, Maryland 20014, (301) 496-4256, or Admitting Officer, National Cancer Institute, Building 10, Room 10N-119, Bethesda, Maryland 20014, (301) 496-2031.

Psychiatric Education in a Family Practice Residency

LOUIS F. RITTELMEYER, JR., M.D.
Washington, D. C.
ALAN MACKINTOSH, M.D.
Vienna, Virginia

The family practice residency program provides much needed post graduate psychiatric training.

EDUCATIONAL PROGRAMS IN PSYCHIATRY for nonpsychiatrist physicians are a relatively recent development. Begun in World War II as a means of meeting a manpower crisis for psychiatric care of US military personnel, continuing education in psychiatry has become a widespread effort over the past 20 years.

In general, its goals have been "that the physician will understand and be sensitive to the emotional needs of the patient, his family, and the (other) biosocial systems within which he functions; that the physician will develop skills to meet those needs and thereby foster emotional growth and mental health to his patient; and that the physician will utilize collateral resources appropriate to those ends." [1]

Supported by medical organizations and educational institutions, these efforts have provided many physicians with knowledge and skills they had little or no opportunity to acquire previously. Prior to World War II, few medical schools offered even a bare minimum of such experience, and at this time rotating internships, as a rule, included no rotation in psychiatry. Consequently, most physicians trained in fields other than psychiatry are deficient in recognizing and managing emotional problems. Continuing education has helped some of them overcome this deficiency.

The development of residency programs in family practice offers an unprecedented opportunity for including psychiatric knowledge and skills in the basic training of physicians. One program of this kind will be described and the incorporation of psychiatry outlined.

The Medical College of Virginia formed a Department of Family Practice in 1970. It has three residency programs: the largest is at Riverside Hospital in Newport News, where there are positions for 12 residents in each of the three yearly levels; another is in the rural town of Blackstone where there are positions for six residents each year; and the third residency is at Fairfax Hospital where there are six positions in each year.

A feature of the MCV system is the Family Practice Center concept where residents spend a large part of their second and third years seeing ambulatory patients. These centers are patterned after a family practitioner's office. They are unique in that, for the first time, a major part of the training program is outside the environs of a hospital. The Fairfax Family Practice Center has two full-time faculty, a Director and an Associate Director.

The first year is spent at Fairfax Hospital in a modified rotating internship with services on Internal Medicine, Pediatrics, Obstetrics-Gynecology and emergency room. Second and third year residents work at the Fairfax Family Practice Center in Vienna, as well as in Fairfax Hospital. Their patients are voluntary and consist of all socioeconomic groups. Their education at the Center consists of didactic presentations, "wet clinics", case con-

Dr. Rittelmeyer is Associate Professor of Psychiatry at Georgetown University School of Medicine.

Dr. Mackintosh is Associate Professor of Family Practice, Medical College of Virginia, and Director, Fairfax Family Practice Center.

ferences, and practical demonstrations daily by a faculty of area consultants. They are also able to gain expertise in business management, bookkeeping methods, and personnel supervision. Each third year resident is made Office Manager for a period to acquaint him with day to day problems that are a part of any community practice. At the completion of their third year, residents are eligible to take the examination of the American Board of Family Practice.

The Consultation

Psychiatric consultation is emphasized in the second and third years. Weekly meetings are held with the resident group. During the first six months, there is a presentation of a selected topic (see Table I) for one and a half hours, followed by a discussion of the residents' patients for one hour. In the second half of the year, the sessions consist of a two-hour case conference.

TABLE I

List of Topics

I *Basic concepts:*
- a. Interviewing
- b. Mental status examination
- c. The doctor-patient relationship
- d. Psychological testing
- e. Family process
- f. Social and Community psychiatry

II *Specific problems:*
- a. Psychiatric consultation
- b. Psychomedical emergencies
- c. Learning disabilities
- d. Problems of adolescence
- e. Problems of middle and old age
- f. Drug addiction and alcoholism
- g. Depression
- h. Schizophrenia

III *Psychiatric therapies:*
- a. Use of psychotropic drugs
- b. Crisis intervention
- c. Supportive psychotherapy
- d. Group therapy
- e. Family therapy
- f. Sex counseling

Consultation is provided by the Georgetown University Department of Psychiatry, which is located in Washington, D. C., about 15 miles from the Center. One Georgetown faculty member coordinates the program and alternates weekly conferences with another faculty member. Several other Georgetown faculty members participate by presenting topics in their areas of special expertise.

The program was started in July 1972, with four second-year residents and an unstructured case-oriented seminar. This proved unworkable, for several reasons. The residents were just beginning to acquire their own patients and most were reluctant to expose their work to the consultant. Furthermore, the diversity of their backgrounds, including the fact that they had not been together as first-year residents, made it necessary for them to spend several months forming a working discussion group.

After about six weeks, a more structured format was adopted with formal presentation of the topics listed. By January, the return to the case-oriented seminar, with residents assuming responsibility for the presentations, was accomplished without difficulty.

This year (1973-74) there are six second year residents, who have been working together for a year. The structured format has been continued for the first six months, but an hour was reserved for discussion of the residents' patients. It required only a few weeks for them to become an effective work group, and discussion of both the presentation and their patients is lively.

Full evaluation of this program must await the residents' entry into practice. Several observations, however, seem warranted at this time. They pertain to: (1) the residents themselves, (2) the model unit experience, and (3) the effects of psychiatric participation.

The residents are primarily service-oriented, but they are also interested in the scientific basis of medical practice. They have varying degrees of interest in the personal aspects of the doctor-patient relationship. Their overriding concern, however, is the care of patients; and their receptivity to teaching efforts is governed by the perceived practical relevance of these efforts.

The Center is a group family medical practice. Its purpose is to provide comprehensive and continuing primary care to families in its community. The great majority of care is carried out within the Center, although residents make house calls and hospitalize their patients as necessary.

The patients are typical of those seen in any suburban family practice. They include many with emotional problems and psychosomatic complaints. The opportunity for the residents to acquire skill in helping the great majority of people who do not need hospital care is apparent.

The psychiatrist's role is that of a consultant. At times he is also a supervisor. His "tools" are didactic presentations, literature reviews, case discussions and patient interviews. Sessions are free-wheeling, with brief anecdotes and detailed case histories providing most of the material, about which views are exchanged.

Some effects have been noted in the residents' approach to patient care. Some have enthusiastically begun to treat patients with emotional disorders, using the psychiatrist for ongoing supervision of their work. Others have consciously developed a greater awareness of their functioning in the doctor-patient relationship, with a consequent improvement in dealing with their more difficult patients. All appear to have become more sensitive to their patients as persons with diverse emotional needs and characteristic reactions to illness and other stresses.

Reference

1. Psychiatric Education and the Primary Physician Task Force Report, Washington, D.C. American Psychiatric Association, 1970.

380 Maple Avenue, West
Vienna, Virginia 22180

Hot Beverages and Heart Attack Patients

If you're convalescing from a heart attack, do not drink hot beverages. They could cause a slowing of the rate and premature contractions of the heart.

Sixty patients with acute heart attacks were monitored at St. Vincent's Medical Center of Richmond, Staten Island, N.Y., after swallowing glasses of hot and cold water. Sixteen of the 60 heart attack patients who drank the hot water showed marked change in heart action. One patient had problems after both hot and cold drinks. None of a group of 40 control individuals who also were given the beverages showed any change.

Administration of a drug, atropine sulfate, prior to drinking the hot water warded off the danger of poor heart action.

The control group was drawn from individuals who had successfully survived for at least six months after a heart attack, plus some entirely healthy individuals.

Conclusion of the report: "Patients with acute myocardial infarction (heart attack) should avoid hot beverages."

The study is by Ludwig Gross, M.D., and Raymon Malaya, M.D. It is reported in the May 20 issue of the *Journal of the American Medical Association.*

The Advantages of Biplane Radiography in Angiography of the Aortic Arch and Brachiocephalic Vessels

WALTER J. FARRELL, M.D.
McLean, Virginia
LARRY W. STANTON, M.D.
Washington, D.C.

Several techniques have been used in studying occlusive cerebrovascular disease. Biplane radiography in angiography provides the most consistent visualization of all important areas of the brachiocephalic arterial system.

ANGIOGRAPHY OF THE AORTIC ARCH and brachiocephalic vessels is of fundamental importance in the evaluation of patients with occlusive cerebrovascular disease. Virtually all of the surgically correctable lesions lie between the aortic arch and the base of the skull. Aortic arch angiography can demonstrate quite nicely all of the vessels in this region. Our experience with biplane angiography of the aortic arch and brachiocephalic vessels indicates to us that it represents a significant improvement over single plane arch studies. We wish to illustrate the advantages of this method and recommend its routine use.

The optimal single projection for angiography of the aortic arch and brachiocephalic vessels is the right posterior oblique (RPO). In this projection, the origins of the innominate, left common carotid and left subclavian arteries are usually projected separately. However, the brachiocephalic vessels may pursue a tortuous and variable course particularly in older patients. This can result in overlapping or foreshortening of vessels with obscuration of areas of significant disease. For the past four years we have been using biplane radiography for these studies simultaneously recording the aortic arch in both the RPO and the left posterior oblique (LPO) projections. On many occasions, the LPO projection has demonstrated the significant pathology or has shown to best advantage a normal vessel in a critical area. Illustrative examples are given below.

Technique

Under local anesthesia, a 7 French catheter (most commonly a Cordis pigtail catheter) is introduced into the femoral artery, advanced into the thoracic aorta and positioned with its tip midway between the aortic valve and the origin of the innominate arteries.

The patient is turned into the RPO position with the shoulders inclined approximately 45 degrees with respect to the horizontal plane. With less inclination, the left vertebral artery will often project over the left common carotid bifurcation. The head is turned into a lateral position, i.e., with the sagittal plane of the skull in a horizontal position. This usually provides optimal visualization of the carotid bifurcations.

We inject 50 to 60 ccs. of Renografin 76 in two to three seconds, most commonly 50 ccs. in two seconds. Serial films are obtained over a 10 second period (2/sec. during injection). Simultaneous biplane radiograph of the upper chest (to include the arch) and the neck vessels (to the base of the skull) is performed. When indicated, this is followed by selective catheterization of carotid or vertebral arteries and cerebral angiography.

The Left Common Carotid Bifurcation

This important area in the RPO projection often overlaps the vertebral column and the contrast filled left vertebral artery (Fig. 1-A). Subtraction technique will usually improve visualization when the vertebra obscures this area but is of no help when the vertebral artery projects over the carotid bifurcation. In the LPO projection, the left common carotid artery is projected free of both vertebrae and the vertebral artery (Fig. 1-B).

Fig. 1-A. Right Posterior Oblique Projection (RPO), subtraction technique. The left vertebral artery overlies and obscures the left common carotid bifurcation.

B. Left Posterior Oblique Projection (LPO) demonstrates the left carotid bifurcation in profile and free of overlapping vascular shadows.

Another problem is the not infrequent superimposition of the left external carotid artery over the origin of the left internal carotid artery in the RPO projection (Fig. 2-A). When this occurs the LPO demonstrates the left carotid bifurcation in a true lateral profile (Fig. 2-B).

Left Subclavian Artery

Visualization of the left subclavian artery in the RPO projection is often limited by overlap of the vertebral column. Subtraction may be helpful in evaluating this area, but at times it is not sufficient to provide adequate visualization.

Case I. A 56-year-old white man was admitted after an episode of amnesia. Five years earlier a bypass graft was placed from the aorta to the bifurcation of the innominate artery for an innominate steal syndrome. Symptoms improved after the earlier surgery. Recently the patient had symptoms of a transient ischemic episode and blood pressure in the left upper extremity was noted to be diminished. On admission, blood pressure measured 126/100 (right arm) and 96/70 (left arm). A grade I to II systolic bruit was heard over the middle third of the clavicle. Angiographic findings are demonstrated in Fig 3 (A and B). No surgical correction was attempted.

Although moderate arteriosclerotic disease of the midportion of the left subclavian artery was demonstrated in the RPO projection, it

Fig. 2-A. RPO, demonstrates no vertebral artery overlap, but the left carotid bifurcation projects enface with the external carotid and internal carotid arteries superimposed.

B. LPO, the left carotid bifurcation well seen in profile.

Fig. 3-A. RPO, demonstrates marked stenosis at the origin of the innominate graft and mild irregularity of midportion of left subclavian artery.

B. LPO, demonstrates stenosis at distal end of the innominate graft and marked stenosis of the origin of the left subclavian artery. Neither lesion was seen in the RPO.

is the tight stenosis of the origin of this vessel, seen only in the LPO, which was largely responsible for the diminished pressure in the left arm. The stenotic areas at the junction of the innominate graft with the right subclavian and right common carotid arteries are also seen only in the LPO projection.

Right Subclavian and Left Vertebral Arteries

Tortuosity of the brachiocephalic vessels which commonly occurs in older patients may result in overlapping or fore-shortening of segments of vessels which in a younger patient would be quite well seen in an RPO projection. In addition, when vessels are tortuous, it may appear that they are being seen in profile when in fact they are not. Both of these observations are demonstrated in the next patient in which a significant stenosis of the right subclavian artery and stenosis of the proximal left vertebral artery was seen only in the LPO projection.

Case II. A 77-year-old white female was admitted with a chief complaint of increasingly frequent episodes of numbness of the cheek, neck, arm, and mouth. She noted mild expressive aphasia in the three weeks prior to admission. A grade I bruit was noted over the left carotid artery. Arteriographic findings are demonstrated in Fig. 4 (A and B). The patient underwent a bypass graft from the right common carotid artery to the right subclavian artery. Improvement was noted with regression of symptoms in the early post-operative period.

This patient's tortuous right subclavian artery was foreshortened in the RPO projection obscuring the marked stenosis which demonstrated in profile in the LPO projection. The left vertebral artery had a normal appearance in the RPO projection, but its stenotic origin was also clearly evident in the LPO. We have noted that the origin of the left vertebral artery is usually best seen in the LPO projection.

Right Common Carotid Bifurcation

Usually the right common carotid bifurcation is ideally visualized in the RPO projection. However, there are some patients in which even this area is better seen in the LPO projection.

Case III. A 61-year-old white man was admitted with a four day history of acute onset of falling and weakness of the left side of the

Fig. 4-A. RPO, demonstrates no stenotic lesion.

B. LPO, demonstrates marked stenosis of right subclavian (lower arrow) and left vertebral (upper arrow) arteries.

body. His speech was slurred. On examination a left hemiparesis and a right carotid bruit were noted. Arteriographic findings are demonstrated in Fig. 5 (A and B). This patient subsequently had a right carotid endarterectomy with a good post-operative result.

There was evidence of atherosclerotic disease in the proximal right internal carotid artery in the RPO projection, but this area was primarily obscured by overlap of the right external carotid artery. The LPO projection demonstrated to much better advantage the severity of the stenosis in this area.

arterial occlusion[3] did not establish an arteriographic protocol. Rather, they allow participating institutions to use whatever techniques they wished with the intent that eventually comparisons and recommendations could be made. Various authors have recommended a variety of projections and techniques including single plane RPO, (2) (6) biplane AP and lateral[7] and biplane RPO and LPO.[1] There is little documentation of the advantages of any one method.

One recent article[5] pointed out the value of subtraction technique in single plane arch

Fig. 5-A. RPO, demonstrates stenosis and irregularity of proximal right internal carotid artery but the severity of the stenosis is difficult to appreciate.

B. LPO, demonstrates the stenotic segment to much better advantage.

Discussion

There is great variability in the angiographic techniques for studying occlusive cerebrovascular disease. These include direct percutaneous carotid and subclavian injection, retrograde brachial injections and catheter aortic arch and selective brachiocephalic studies.[4] So diverse are the equipment and methods being used that a joint study for extra cranial

studies. Subtraction has often been helpful to us. However, biplane radiographs have proven to be more valuable in our experience.

Biplane studies provide the most consistent visualization of all important areas of the brachiocephalic arterial system. We recommend its routine use whenever biplane capability is available. If these studies are done primarily as a search for surgically correctable

disease, often no more need be done. However, greater detail of the carotid bifurcations will be provided by selective angiography of the carotid arteries. This should be done whenever an arch study does not provide adequate diagnostic information.

Bibliography

1. Abrams, H. L.: ed. Angiography, 2nd Ed. Little Brown and Co., Boston 1971.
2. Curry, J. L., and Howland, W. J.: Arteriography Principles and Techniques. W. B. Saunders Co., Philadelphia, 1966.
3. Haas, W. K., Fields, W. S., North, R. R., Kricheff, I. I., Chase, N. E., and Bauer, R. B.: Joint Study of Extracranial Arterial Occlusion II Arteriography, Techniques, Sites, and Complications. J.A.M.A. 203, 916-968, 1968.
4. Hinck, V. C., Judkins, M. P., and Paxton, H. D.: Simplified Selective Femoro-Cerebral Angiography, an Improved Method. Radiology 89, 1048-1052, 1967.
5. Hoffman, R. B., and Rein, B.: The Routine Use of Subtraction in Aortic Arch Studies. Radiology 102, 575-578, 1972.
6. Newton, T. H., Adams, J. E., and Wylie, E. J.: Arteriography of Cerebrovascular Occlusive Disease. New England J. M. 270, 14-18, 1964.
7. Schobinger, R. A., and Ruzicka, F. F.: eds. Vascular Roentgenology. Macmillan Co., New York, 1964.

3300 Gallows Road
Falls Church, Virginia 22046

Substitute for Transfusions

A hyperbaric oxygen chamber may save the life of a seriously anemic patient who refuses blood transfusions because of religious beliefs, says a report in the May 20 issue of the *Journal of the American Medical Association.*

Capt. George B. Hart, M.D., of the U.S. Naval Hospital at Long Beach, Calif., reports on successfully treating three such patients.

"Treatment of blood loss anemia in patients who, for religious beliefs, refuse blood transfusion, is vexing," says Dr. Hart. He points out that serious brain damage could occur from lack of oxygen after severe blood loss. The oxygen chamber apparently provides the necessary oxygen to get the patient over the critical stage and permit recovery to begin.

The three patients, all seriously ill, were transferred to the Long Beach Naval Hospital to take advantage of its oxygen chamber. They were each placed in the chamber, and also were given intravenous fluids, a balanced saline solution.

"Treatment with hyperbaric oxygen resulted in dramatic improvement, with reversal of the signs and symptoms of hypoxia in all three patients."

Primary Adrenal and Ovarian Failure

STEPHEN H. SCHACHNER, M.D.
Falls Church, Virginia

A case of primary adrenal and ovarian failure is presented and syndromes of pluriglandular failure are discussed.

THE FAILURE OR INSUFFICIENCY of more than one endocrine gland is initially thought of in clinical practice as pituitary or hypothalamic in origin. However, pluriglandular failure is not necessarily of central origin, and distinctive syndromes or associations have been well documented.

Addison's disease (idiopathic adrenal atrophy) is frequently associated with other endocrine system deficiencies[1,2,3]. This report entails an association of primary adrenal and ovarian failure with comments on its suggested pathogenesis, and a discussion of syndromes of pluriglandular failure.

Case Report

A 31 year old white female presented with several months history of lassitude, fatigue, nausea, vomiting, ultimate dehydration and pigmentation. The physical findings and chemical studies confirmed the picture of primary adrenal insufficiency of idiopathic origin. She was discharged on replacement hydrocortisone but in addition required Florinef®.

Approximately 18 months from the time of the initial diagnosis she was seen with complaints of amenorrhea of 15 months duration in association with a history of typical vasomotor flashes and decreased libido. The physical examination at this time revealed a multinodular goitre, lightening of previous pigmentation but decreased axillary and pubic hair.

Upon admission to Fairfax Hospital pertinent laboratory studies were obtained:

Normal skull and chest films, a thyroid scan consistent with a multinodular goitre and a 24 hour uptake of 26%. Normal T_3, T_4 & TBG levels. A 24 hour urine for pregnanediol was nondetectable or zero mg.%. A 24 hour urine for total estrogens 12.1 mcg (low). FSH levels by radio assay were markedly elevated at 56.5 MIU and 45.0 MIU (normal 3 to 14). Antibodies to thyroid and adrenal tissue could not be detected (courtesy of Dr. Robert Blizzard, Johns Hopkins School of Medicine).

Subsequent laparoscopic visualization of the ovaries (Dr. Russell May) revealed a characteristic picture of atrophic ovaries.

Discussion

The underlying pathogenetic mechanism in this disorder is felt to be auto-immunity.[4] Tissue specific antibodies to adrenal tissue have been reported in numerous instances in idiopathic adrenal insufficiency and certainly to other tissue in pluriglandular syndromes.[5,6,7]

The failure to direct antibodies in this instance does not detract from this concept. The available laboratory techniques may lack the degree of sensitivity required to confirm the presence of antibodies and this fact has been appreciated in the evaluation of Hashimoto's thyroiditis.

Irvine[5] studied 105 cases of Addison's disease, and delineated a high concurrent incidence of thyrotoxicosis, atrophic goitre, thyroiditis insulin dependent diabetes mellitus, pernicious anemia, idiopathic hypo-parathyroidism and idiopathic gonadal failure. Table I summarizes the entities that are considered auto immune in nature and defines its clinical associations. In clinical practice the commonest associations are those of insulin dependent mellitus with thyroiditis or pernicious anemia.[8]

Vitiligo is not uncommonly seen with various diseases of the thyroid gland.

TABLE 1

AUTO-IMMUNE POLYENDOCRINOPATHIES

1. Schmidt's Syndrome
   Addison's Disease and primary hypothyroidism plus or minus diabetes
2. Pernicious Anemia (thyrogastric antibodies plus or minus diabetes mellitus
3. Idiopathic hypo-parathyroidism
4. Auto-Immune Thyroid Disorders (thyroiditis—thyrotoxicosis)
5. Diabetes-Vitiligo—associated with any of these disorders on this table
6. Idiopathic Ovarian Insufficiency
7. Idiopathic Addison's Disease—(hyperthyroidism and diabetes)
   (parenthetical entities are indicative of most common associations)

Certainly diabetes mellitus is not felt to be auto-immune, but its association with these disorders is significant, and the familial nature of both may be indicative of a genetic predilection.[9]

In some of these associations shared antigens (i.e. gonadal and adrenal) may be responsible for the destruction of two dissimilar glands.

REFERENCES

1. Turkington, R.W. and Lebovitz, H.E.: Am. J. Med. 43: #4, 499-507, 1967.
2. Christy, N.P., Holub, D. and Tomasi, T.B.: J. Clin. Endocrinol. 22:155-160, 1962.
3. Blizzard, R.M., Chee, D. and Davis, W.: Clin. Expl. Immun. 2, 19, 1967.
4. Blizzard, R.M., Kyle, M.: J. Clin. Inves. 42: 1653-1660, 1963.
5. Irvine, W.J., Stewart, A.G., Scarth, L.: Clin. Expl. Immun. 2-31, 1967.
6. Blizzard, R.M., Tomasi, T.B. and Christy, N.P.: J. Clin. Endocr. 23, 1179, 1963.
7. Forcier, R.J., McIntyre, Or. R. et al: Arch. Int. Med. 129, 639, 1972.
8. Schachner, S.H.: Virginia M. Monthly Nov., 1972, (Abstract).
9. Spinner, M.W., Blizzard, R.M. & Childs, B.: J. Clin. Endocrinol. 28:795, 1968.
10. Hall, R.: New England J. M. 266: 1204, 1962.
11. Doniach, D., Roitt, I.M., Taylor, K.B.: Ann. N.Y. Acad. Sci. 124: 605, 1965.

3300 Gallows Road
Falls Church, Virginia 22046

LET'S REMINISCE!

Trolley Car Ambulances

Are about to be introduced in the city of Pittsburgh, Pa., running independently over all the street-car tracks of the city as called for—so says the *Scientific American.*

(Virginia Medical Semi-Monthly, Vol. 2, December 24, 1897)

Pulmonary Edema Caused by Methadone

BURTON A. JOHNSON, M.D.
Falls Church, Virginia
A. EVERETTE JAMES, JR., M.D.
MYRON S. LEVEY
H. JAMES CAMPBELL, M.D.
Baltimore, Maryland

A case of methadone induced pulmonary edema in a 13 month old child is documented by chest radiographs and blood gases. The importance of this case is that it occurred in a nonaddict who was not concurrently taking any other medications after ingestion of an obvious overdose of methadone. The subsequent pulmonary edema must have resulted from some pharmacologic effect of the methadone and not from a combination of drugs or from an impurity. Although the pathophysiology is not known, the clinical entity of methadone induced pulmonary edema should be suspected and recognized when it occurs.

IN RECENT YEARS drug abuse, particularly heroin addiction, has become a major medical and social problem. Heroin addiction has caused an incalculable loss of human life and productivity and has contributed to the recent increase in crime. Of the numerous approaches to rehabilitating heroin addicts, the latest, methadone maintenance, appears to offer the greatest promise (Dole, 1971) (Dole, Nyswander 1965) (Brill, 1971). Methadone, however, also has potential for abuse and with thousands of addicts now taking this drug, complications from the drug itself can be expected. These complications may also affect nonaddicts who inadvertently take the drug. The toxic effects of methadone and heroin are similar, yet there are significant differences (Frand, Shim, Williams, 1972). The following example and review of the literature will serve to illustrate these points and their clinical implications.

JOHNSON, BURTON A., M.D., *Instructor, Department of Pediatric Radiology, Johns Hopkins Medical Institutions, Baltimore.*

JAMES, A. EVERETTE, JR., M.D., *Director, Radiological Research Laboratory, Johns Hopkins Medical Institutions, Baltimore.*

LEVEY, MYRON S., *Medical Student, Johns Hopkins Medical Institutions, Baltimore.*

CAMPBELL, H. JAMES, M.D., *Radiologist, Mercy Hospital, Baltimore.*

Case Report

The patient, a 13 month old black male, was taken to a community hospital on September 14, 1972, after ingesting 20 mg. of liquid methadone. This medication had been given to his mother who was in a drug maintenance program and represented her usual single daily dose. It was, therefore, a significant overdose for a small child. By history, the patient became drowsy and ataxic within 30 minutes after ingestion and became cyanotic while on route to the hospital. He had not been apneic. Gastric lavage, intravenous fluids, and Narcan[a], 0.08 mgm, intravenously were given. He was then transferred to a larger metropolitan hospital approximately two hours after ingesting the methadone.

On physical examination the child was stuporous, but not cyanotic; his pupils were

miotic and he had noisy respirations accompanied by supersternal retraction. His temperature was 100°F, pulse 140 per minute, respirations 24 per minute, and blood pressure 100/60. Rhonchi were heard throughout the chest, and all reflexes were depressed.

The WBC was 17,200; Hgb was 12.7; Hmct, 38; blood sugar, 166 mgm%; BUN, 11 mgm%, Na, 141 meq/L; K, 4.2 meq/L; CL, 104 meq/L; CO_2, 24.2 meq/L. Blood gases on admission were: pCO_2, 57 mm. Hg, pO_2, 60 mm. Hg, and O_2 saturation 85% with a ph of 7.25. Both blood and urine were positive for methadone.

The admission chest radiograph showed dilatation of the perihilar vessels with a loss of vessel wall—air interface. These findings were thought to represent moderate pulmonary vascular edema (Fig. 1A).

Fig. 1A. Antero-posterior radiograph taken in emergency room upon patient's arrival. The perihilar vessels are dilated and there is loss of vessel wall-air interface consistent with early interstitial pulmonary edema.

On admission gastric lavage was continued; an airway was maintained by intubation and oxygen and intravenous fluids were administered. Cardiac arrest occurred 30 minutes after admission. His heart rate was quickly reestablished with resuscitative efforts and two doses of Nalline[b], 0.1 mg./kg., and Narcan, 0.2 mg., intravenously. Shortly thereafter, 10 mg. of Solucortef[c] were given and repeated every six hours. His pupils remained constricted. Ten hours after admission, the blood ph was 7.30, the pCO_2 had decreased to 49.5 mm. Hg pO_2 was 67 mm. Hg, and the O_2 saturation was 90%. The CO_2 had decreased to 23.6 meq/L, and the electrolytes and BUN remained normal. A radiograph taken at that time showed partial clearing of the pulmonary edema (Fig. 1B).

Fig. 1B. Chest radiograph obtained ten hours later after intubation, oxygen therapy, and administration of antinarcotic agents. There has been a decrease in the signs of pulmonary edema.

On the second hospital day, his chest radiograph showed only mild changes of interstitial pulmonary edema, a definite improvement over the admission radiograph (Fig. 2). Lasix[d], 1 mg./kg., and five doses of 0.1 mg./kg. of Narcan were given.

The patient's sensorium began to clear and his pupils became less miotic and more reactive. The methadone serum level was 2.4 mcg. per liter. On the third day, the child was awake and alert. The dose of Solucortef was decreased, and it was discontinued the following day. On the fifth day, the child was alert and active, and his chest radiograph was normal (Fig. 3). He was discharged home in good condition.

Discussion

Methadone is a synthetic drug first pro-

Fig. 2. Chest radiograph taken twenty-four hours after admission, the pulmonary vascular pattern is nearly normal.

Fig. 3. The chest radiograph taken on the day of discharge is normal.

duced in Germany in 1941. Its outstanding property is analgesia, for which it was developed to be used as a morphine substitute (Beaver, Wallenstein, Houde, Rogers, 1967) (Bieter, Hirsch, 1948) (McCurley, Tunnessen, 1969). The pharmacological action of methadone is similar to morphine and heroin, but its molecular structure is quite different (Fig. 4) (Goodman, Gilman, 1970) (Ratcliffe, 1963). The analgesic effect of methadone slightly exceeds that of morphine. Methadone is one half as potent orally as parenterally. This is a high ratio for oral activity in comparison with other narcotics (Beaver et al.

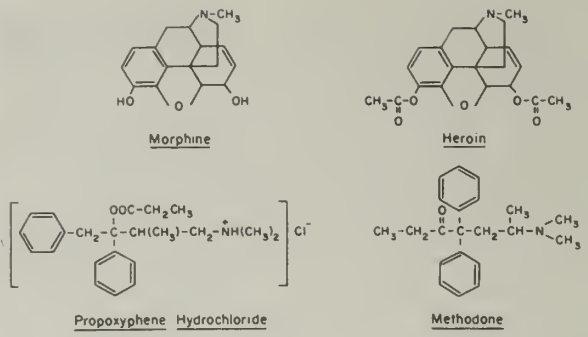


Fig. 4. Molecular structures of morphine, heroin, propoxyphene (Darvon) and methadone. Heroin is derived by the addition of two acetyl groups to morphine. Methadone and Darvon are very similar in structure, but do not closely resemble morphine or heroin.

1967). Yet in single doses, it is less soporific than either heroin or morphine (Frand, et al. 1972). Although there is no definitive controlled study, observations by many clinicians indicate the effect of methadone is more prolonged than that of heroin or morphine. Methadone is an antitussive, decreases pulmonary ventilation, and causes hyperglycemia, hyperthermia, and the release of antidiuretic hormone. It is metabolized mainly by the liver and less than 10% is excreted in the urine (Goodman, Gilman, 1970).

The first methadone fatality in the United States was reported in 1948 in an adult male who had received 50 mgm. over an eight hour period (Beiter, Hirsch, 1948). We found only three previous reports of methadone toxicity in children (McCurley, Tunnessen, 1969) (Ratcliffe, 1963) (Roxburgh, Munrol-Faure, 1951). However, methadone has been widely used in routine medical practice in Europe, so it is likely that there may be additional cases of toxicity in children that have not been reported (McCurley, Tunnessen, 1969). This patient is the youngest child reported with methadone toxicity; but with the thousands of heroin addicts now on methadone maintenance programs, many of whom are parents, it is probable this type of poisoning will become more frequent (Dole, 1971) (Dole, Nyswander, 1965) (Brill, 1971).

Laennec's description of pulmonary edema in 1834 stated, "edema of the lung is the in-

filtration of serum into the substance of this organ, in such degree as evidently could diminish its permeability to the air, in respiration" (Laennec, 1932). Pulmonary edema secondary to narcotic overdosage has been known since Osler's description in 1880 (Osler, 1880). Heroin induced pulmonary edema is frequently seen in the emergency rooms of most large metropolitan hospitals, but methadone induced acute pulmonary edema is increasingly occurring (Dole, 1971) (Frand, et al. 1972) (Gardner, 1970) (Malik, Olivero, Sutherland, 1972).

Pulmonary edema has been the characteristic manifestation of methadone overdosage in previously reported cases (Bieter, Hirsch, 1948) (Frand, et al. 1972) (Gardner, 1970) (Kjeldgaard et al., 1971) (Malik et al. 1972) (McCurley, Tunnessen, 1969) (Ratcliffe, 1963) (Roxburgh, Munrol-Faure, 1951). In Gardner's series of 12 deaths due to methadone overdosage, all the victims had acute pulmonary edema (Gardner, 1970). Seven of them had concurrently taken other drugs (a common practice in the addict population), which may have had some unknown synergistic action with the methadone in producing pulmonary edema. Several cases of pulmonary edema following oral ingestion of methadone have been recently reported (Frand et al. 1972) (Malik et al. 1972). In 1972, methadone related deaths exceeded heroin related deaths in the District of Columbia, and we suspect this may be true in other urban centers as well (Dupont—personal communication) (Greene—personal communication).

The pathogenesis of the pulmonary edema following narcotic and methadone overdosage is unknown. The clinical triad of coma, miosis, and depressed respiration is well known (Helpern, Rho, 1966) (Karliner, Steinberg, Williams, 1969) (Lynch, Greenbaum, O'Laughlin, 1970) (Morrison, Wetherill, Zyroll, 1970) (Osler, 1880) (Steinberg, Karliner, 1968) (Stern, Spear, Jacobson, 1968) (Troen, 1953). Many causes of pulmonary edema in narcotic overdosage have been postulated including hypersensitivity, hypoxemia, direct central nervous system action, and impurities in the drug.

Hypersensitivity alone is an unlikely cause of pulmonary edema in most methadone poisonings. Helpern has described an anaphylactoid type reaction in some heroin deaths, but this explanation does not adequately account for the majority of cases of methadone or narcotic induced pulmonary edema, particularly those cases in which the pulmonary edema does not appear for several hours after ingestion or injection (Helpern, Rho, 1966) (Steinberg, Karliner, 1968). Although allergic reactions are associated with increased capillary permeability that can lead to acute pulmonary edema, they do not appear to be a factor in methadone pulmonary edema. Of greater significance is loss of drug tolerance by addicts or, as in our case, a lack of tolerance (Gardner, 1970) (Helpern, Rho, 1966) (Luisada, Cardi, 1956).

Drug impurities may be a cause of pulmonary edema and death associated with heroin use. The drug itself may be contaminated, since it is never produced, packaged, or administered under sterile conditions, or impurities may be introduced when it is diluted with a variety of substances such as quinine, powdered milk, etc. Methadone, however, is produced and dispensed in a pure state under clean conditions and is usually administered orally. Many drug addiction treatment programs are careful to dispense the methadone in the form of a suspension that precludes intravenous injection (Dupont—personal communication) (Greene—personal communication). Therefore, it is improbable that the pulmonary edema associated with methadone is caused by impurities in the drug. In our case, for example, the child, a non-addict, ingested an adult dose of pure methadone and developed pulmonary edema.

Hypoxemia has been shown to cause pulmonary edema and may be the cause of the pulmonary edema that occurs at high altitudes (Luisada, Cardi, 1956) (Viswanathan, Jain, Subramanian, 1969) (Viswanathan, Jain, Subramanian, 1969) (Viswanathan, Jain, Sub-

ramanian, 1969). Profound hypoxemia alone, however, has not produced pulmonary edema experimentally except in animals where the hypoxia is accompanied by exercise (Viswanathan, Jain, Subramanian, 1969). Pulmonary edema, however, is rarely seen with the severe respiratory depression and hypoxia of barbiturate overdosage and when it is, it almost always occurs hours or days after ingestion and is usually associated with excessive intravenous fluid administration (Clemmesen, Lassen, 1963) (Steinberg, Karliner, 1968). Thus, it is unlikely that hypoxia is the sole cause of pulmonary edema induced by heroin or methadone.

Central nervous system depression is associated with increased capillary permeability and pulmonary edema (Luisada, Cardi, 1956). Morphine, heroin, and methadone have been experimentally shown to rapidly penetrate the blood-brain barrier. This is especially true for heroin and methadone (Oldendorf et al. 1972). The resulting CNS depression and hypoxia are known to increase pulmonary capillary permeability and may be one cause of narcotic induced pulmonary edema.

Of the important pathophysiological mechanisms of pulmonary edema—1. increased pulmonary wedge pressure, 2. increased vessel permeability, and 3. decreased osmotic pressure in the pulmonary capillaries—experimental and pathological data appear to favor the second as the main cause of narcotic and methadone induced pulmonary edema. Whether this increased capillary permeability is secondary to CNS hypoxia or represents a direct action of the drug on the pulmonary vascular bed remains to be established.

Propoxyphene hydrochloride (Darvon)[e], which has a structure similar to methadone (Fig. 4), has also been reported to cause pulmonary edema (Bogartz, Miller, 1971). Heroin, methadone, and propoxyphene all cause respiratory depression and arterial hpyoxia. The basic problem is whether respiratory depression, arterial hypoxia and pulmonary capillary permeability are etiologically related or are different manifestations of a general underlying dysfunction produced by these agents.

Many narcotic addicts, despite being on methadone treatment programs, continue to take drugs such as cocaine, heroin, and amphetamines. A popular drug combination "on the street" is amphetamine and methadone. A combination of amphetamine and methadone may lower the mean lethal dose of methadone in the same way that cocaine apparently lowers the m.l.d. of heroin (Greene—personal communication—). This would not apply in a nonaddict case as we have presented, but it might be of significance in addicts. These hypotheses need to be tested to experimental animals.

The authors would like to express their appreciation to Dr. John P. Dorst for assistance in preparation of the manuscript. Henri Hessels and Willie Ragsdale prepared the figures.

[a] Narcon—Naloxone Hydrochloride—Endo Laboratories Inc., Garden City, N.Y.

[b] Nalline—Nalline Hydrochloride—Merck, Sharpe, and Dohme, West Point, Pa.

[c] Solucortef—Hydrocortisone Sodium Succinate—The Upjohn Company, Kalamazoo, Mich.

[d] Lasix—Furosemide—Hoechst Pharmaceuticals Inc., Somerville, N.J.

[e] Darvon-Propoxyphene Hydrochloride—Eli Lilly and Co., Indianapolis, Ind.

A full list of references may be obtained from authors.

3300 Gallows Road
Falls Church, Virginia 22046

Eleven Gout Problems

PAUL G. ROCHMIS, M.D.
Fairfax, Virginia

In recent years there has been an impressive increase in the knowledge of gout. It is recognized to be a wide-spread and important disease. Eleven problem cases are presented here which illustrate a few of the different facets of evaluation and care of patients with this disease.

THE CLINICAL SPECTRUM OF GOUT has expanded greatly over the last several decades, in large part because of striking progress in understanding the underlying metabolic abnormalities and also because of the availability of newer drugs which usually allow successful control of the disease process. A recent detailed review by Gutman traces this progress over the last 40 years.[1] When contrasted with the preceding 1800 years the recent increment in knowledge has been astounding. Nowadays, most physicians recognize the usual classical presentation of a highly-inflammatory mono- or pauci-articular arthritis, usually involving the first metatarso-phalangeal region (about 50% of initial attacks, eventually involved in 90% of patients at one time or another), frequently preceded by physical or emotional trauma, dehydration or overindulgence in food or drink. They have been trained to look for an elevated serum uric acid level and perhaps even to firmly verify the diagnosis by aspiration of the involved joint or a clinically non-involved region such as a subcutaneous nodule in the hopes of identifying microscopically typical urate crystals (Fig. I). Treatment then is rather straightforward, with institution of an anti-inflammatory drug perhaps accompanied at that time or subsequently by institution of hypouricemic therapy. Wide experience with clinical gout affords the opportunity of experiencing unusual or problem cases and because of their interest and educational value 11 such cases chosen from the author's experience in clinical practice are presented.

Case 1: M.M., a 48-year old toy designer presented with acute inflammatory swelling of the right wrist following modest "overindulgence" and at that time was found to have an elevated serum uric acid level of 11.2 mg% (the upper limit of normal in this and subsequent cases is 8.0 mg% by the autoanalyzer technique). One year previously he had noted acute arthritis of an ankle following prolonged dancing which resolved on salicylates over the next several weeks. He related that his ankle felt as if it were "falling off" and that he would not allow a bedsheet to touch the joint because of the severe tenderness, a description quite similar to the classical description of Sydenham almost 200 years ago (Fig. II). He had been treated for seven years with two thiazide diuretic pills daily for hypertension. The present attack was rapidly controlled with indomethacin 25 mg q 4 hours and subsequently the thiazide was replaced by methyldopa with excellent control of his mild hypertension. Repeat uric acids have remained in the normal range and over the ensuing two years since he was first seen he has had no further arthritic episodes.

Comment: The thiazide diuretic contributed to his hyperuricemia which in turn predisposed him to the infrequent acute gouty attacks. These were preceded by overindulgence and physical stress. Rather than commit this patient to chronic hypouricemic therapy the simple elimination of the thiazide, combined with periodic follow-up uric acid

Fig. 1. Urate crystals as seen microscopically under polarized light. Approximate lengths range from 10-30 microns.

determinations (and urinalyses) has been successful.

Case 2: R.T., a 56-year old male was seen in consultation at Fairfax Hospital because of sub-acute inflammatory swelling of the left knee superimposed upon a background of chronic but low-grade inflammatory swelling of the elbows, ankles, subtalar and mid-foot joints of both feet. In the past he was said to have had an elevated serum uric acid level but at the time had been taking low-dose Aspirin (which can also cause hyperuricemia) and no crystalline diagnosis had been obtained. During this admission the initial uric acid was 6.7 mg% while he was on no medications which could lower his uric acid level and subsequent values remained in the normal range. Fluid was aspirated from his left knee and typical urate crystals, both intra-cellular in white blood cells and extra-cellular were observed. Initially he was treated successfully with indomethacin and subsequently placed on prophylactic colchicine. It was suggested that hypouricemic therapy with allopurinol be started with the goal of keeping his serum uric acid levels in the range of 4 mg%. There was no evidence of a second rheumatologic process.

Comment: It has been observed that the more proximal joints involved with gouty arthritis may be less strikingly inflamed than the distal joints and therefore the relatively mild inflammation of this patient's knee was not unexpected, especially since the inflammatory process was not acute. The unexpected finding of typical urate crystals on joint fluid analysis formed the basis for the diagnosis and also illustrated the importance of joint aspiration and microscopic analysis in cases of arthritis of uncertain cause. Crystalline-proven gout with normal serum uric acid levels in patients on no hypouricemic therapy is rare but occasionally seen and just as the presence of an elevated serum uric acid does not prove that a patient has gouty arthritis, neither should a normal value (especially at the time of any gouty attack) totally eliminate this diagnosis.

A Treatiſe of the Gout.

The patient goes to bed, and ſleeps quietly, till about two in the morning, when he is awakened by a pain, which uſually ſeizes the great toe, but ſometimes the heel, the calf of the leg, or the ancle. The pain reſembles that of a diſlocated bone, and is attended with a ſenſation, as if water juſt warm were poured upon the membranes of the part affected; and theſe ſymptoms are immediately ſucceeded by a chillneſs, ſhivering, and a ſlight fever. The chillneſs and ſhivering abate in proportion as the pain increaſes, which is mild in the beginning, but grows gradually more violent every hour, and comes to its height towards evening, adapting itſelf to the numerous bones of the *tarſus* and *metatarſus*, the ligaments whereof it affects; ſometimes reſembling a tenſion or laceration of thoſe ligaments, ſometimes the gnawing of a dog, and ſometimes a weight and *coarctation*, or *contraction*,* of the membranes of the parts affected, which become ſo exquiſitely painful, as not to endure the weight of the cloaths, nor the ſhaking of the room from a perſon's walking briſkly therein. And hence the night is not only paſſed in pain,

Fig. 2. Sydenham's classical description of a gouty attack, from "A Treatise of the GOUT and DROPSY" (*The Works of Thomas Sydenham, M.D.* Vol. II, London, 1788, pp. 184, 185)

Case 3: H.C., a 76-year old black male was admitted to Fairfax Hospital with a rather unclear history of generalized aches and pains, obtained from accompanying friends. He was said to have had "rheumatoid arthritis" for many years. Subsequent evaluation revealed evidence of advanced arteriosclerotic cardiovascular disease, congestive heart failure, senility and cirrhosis of the liver. Uric acid levels were elevated to as high as 11 mg%, blood urea nitrogen was 73 mg% and urinalysis revealed 25-30 WBC/HPF, 1-2 RBC/HPF and 3+ albumin. Urine culture revealed greater than 100,000 colonies of E.coli. A microscopic contact slide made from a draining area of whitish, pasty material from one of his many swollen and deformed joints revealed typical urate crystals (Fig. III). Despite vigorous therapy he died a cardiovascular death two months after admission. Autopsy revealed massive kidney involvement with interstitial urate deposition, no uric acid lithiasis.

Fig. 3. Case 3: Involvement of fingers in advanced tophaceous gout. Contact slide was made from the drainage area on the radial aspect of the 3rd proximal interphalangeal joint.

Comment: This unfortunate patient had no medical care for many years prior to his terminal admission. Urate nephropathy contributed to his death and probably could have been prevented with timely therapy. Chronic tophaceous gout can mimic rheumatoid arthritis including symmetrical involvement of the small joints of the hands, chronic mild pain and morning stiffness. Gouty renal involvement can take one or both of two forms: interstitial deposition of urate crystals or the formation of uric acid containing renal stones in the pelvis or collecting system. The major danger of long-term untreated hyper-uricemia is renal injury, especially since the patient may present no symptoms to alert him or the physician. Making a contact slide from a draining tophaceous area is a simple method of rapidly making a crystalline diagnosis of gout.

Case 4: W.T., a 56-year old black male was seen in consultation at Fairfax Hospital because of an inflammatory arthritis involving in sequence the right first metatarso-phalangeal, the right knee and subsequently the left

first metatarso-phalangeal joints. He was unable to walk because of the severity of the symptoms. "Mild" hypertension had been noted three years prior to admission but had been untreated. He related no history of urinary symptoms, back pain or renal lithiasis. Uric acid 9.8 mg%, BUN 25 mg%, urinalysis revealed 2+ albumin and 2-4 WBC/HPF. Joint fluid analysis showed typical urate crystals. He responded well to appropriate anti-inflammatory therapy and subsequently was begun on allopurinol 100 mg qid.

Comment: This rather straightforward case of acute gouty arthritis presents the additional interesting problem of mild renal abnormalities of uncertain etiology. These could easily be explained on the basis of his chronic hypertension but recalling the lesson from the preceding case it is probably best to assume that urate nephropathy could be causing the abnormalities and therefore the patient should be treated with hypouricemic therapy for at least several years, if not for the rest of his life. Allopurinol, by interfering with uric acid synthesis, lowers serum uric acid levels without presenting an additional excretory load of urate to the kidneys, after an initial equilibrium period of several days. In theory, allopurinol is preferable to the major alternative drug, probenecid, when hyperuricemia and renal abnormalities of any type coexist. Patients in this category who cannot tolerate allopurinol or who have had an adverse reaction to the drug can certainly be treated with probenecid (or the current third-choice agent, sulfinpyrazone), providing additional precautions in terms of maintaining good urinary flow and alkalinization of the urine are observed. The latter two medications increase renal excretion of uric acid and, therefore, are categorized as uricosuric agents.

Case 5: M.H., a 56-year old physician (not an M.D. however!) was first seen because of an acute attack of gouty arthritis despite treating himself with indomethacin 25 mg qid, prn phenylbutazone, and 0.5 mg colchicine q 3 hours. Typical acute episodes of inflammatory arthritis and elevated uric acid levels were documented by history and subsequently a crystalline diagnosis was made. Initial uric acid level was 9.6 mg%. The patient admitted to "4-5" drinks daily but subsequent discussion with his family and friends revealed that he drank 1-2 *quarts* of Scotch daily on a regular basis. Over the ensuing three months a varying regimen of high-dosage indomethacin, phenylbutazone and colchicine in addition to local injections of a steroid suspension were utilized in an attempt to control the inflammatory symptoms. Eventually he was begun on hypouricemic therapy with allopurinol, and uric acids fell to the range of 6 mg%, suggesting that he was actually taking his medication. Despite multiple clear and pointed discussions regarding the adverse effect of his continued drinking he maintained his prior alcohol intake. Psychotherapy was suggested and refused. The situation was discussed with the patient and his family and they were told that it would be impossible to adequately control his gouty arthritis if he insisted on continuing his drinking habits. He was referred to his family physician for further care and has been lost to follow-up.

Comment: The role of alcohol in provoking attacks of acute gout has been documented for hundreds of years and its hyperuricemic effect also noted; however, the mechanism of the latter is unclear. Alcoholics may be unreliable and not take their medication but in this case there was good reason to believe that the patient actually was taking his medication as ordered, concurrent with his exceedingly heavy alcohol intake. The clinical observation of the inability to control inflammatory manifestations of chronic or sub-acute gout (despite adequate control of serum uric acid levels) in alcoholics is not new but worth restating. Some of the frustrations of trying to control gout in an alcoholic are illustrated by this case.

Case 6: J.J., a 38-year old male was seen because of marked inflammatory swelling of his right ankle, subtalar and mid-foot region. Two months prior to this he had been treated for a urethral discharge by his family physician

and was told that he had gonorrhea, although there had been no bacteriologic confirmation. Subsequently he was found to have an elevated serum uric acid and treated with probenecid, intravenous colchicine and a combination of oral probenecid and colchicine (ColBenemid) with equivocal clinical response. His initial urethral discharge had been treated with penicillin and subsequently a tetracycline-type antibiotic. He was said to have had a past history of "gout" but the basis for the diagnosis was unclear to him. Further evaluation revealed a recent history of cervical spine pain and stiffness and a chronic rash on the plantar surfaces of both feet consisting of hyperkeratosis and small papules suggesting a chronic Reiter's rash. Uric acid was normal at 5.1 mg%, gram stain and culture of his urethral discharge were negative. He was treated with indomethacin 25 mg tid with excellent relief of his foot and neck symptoms. Pelvic x-rays failed to reveal sacroiliac changes.

Comment: The occurrence of a highly-inflammatory arthritis in a region where gout is frequently seen accompanied by a past history of "gout" and on at least one occasion an elevated uric acid level should not automatically close the physician's mind to other possibilities. The diffuse inflammatory foot and ankle involvement eliminated a reasonable possibility of aspiration for joint fluid analysis; however, the alternative diagnosis of chronic Reiter's arthritis became more attractive as additional information was obtained. The "spondylitic variant" arthritis such as psoriatic arthritis, Reiter's arthritis or the arthritis associated with inflammatory bowel disease frequently will be mono- or pauci-articular, involve the lower extremities and at times will appear highly inflammatory and thus mimic gout. Hyperuricemia of modest degree is sometimes seen with active psoriasis but the most usual explanation is that the patient has been taking low-to-moderate doses of an aspirin-containing drug for his arthritis and the uric acid is elevated because of this. Doses of aspirin above about 60 grains per day seem to have the opposite effect and may actually lower serum uric acid levels slightly. If diagnostic uncertainty exists then a trial of colchicine could be instituted and it is unlikely (although not impossible) that an arthritis *other* than gout will respond. Indomethacin is a potent anti-inflammatory agent for the treatment of either gout or a spondylitic-type arthritis and would not differentiate between the two.

Case 7: P.K., a 62-year old chef, presented with a 17-year history of symmetrical, inflammatory polyarthritis which had been treated with a variety of anti-inflammatory medications including indomethacin, phenylbutazone and prednisone. Uric acid levels were said to be highly elevated in the past. Physical examination revealed active synovitis at the elbows, wrists, small joints of the hands, knees and feet with no evidence of subcutaneous nodules or tophi. An attempt was made to aspirate fluid or solid tophaceous material for diagnostic purposes from several joint areas but this was unsuccessful. Uric acid was 11.6 mg%, Westergren erythrocyte sedimentation rate highly elevated at 100 mm/hr. He failed to respond significantly to aspirin in the range of 90 grains per day, and several local joint injections with steroid suspension were also of no benefit. Rheumatoid factor as the titered RA latex was positive in a 1:320 dilution. A probable diagnosis of rheumatoid arthritis was made and he was begun on weekly injections of gold sodium thiomalate with continuation of his prior medications. He developed gradual but clear improvement in arthritic symptoms, physical examination and a decrease in his sedimentation rate to 27 mm/hr. Repeat uric acid was 3.8. He continues to do very well and was able to return to full-time employment.

Comment: A chronic symmetrical inflammatory polyarthritis, especially if involving the small joints of the hands and wrists, strongly suggests rheumatoid arthritis and the patient's subsequent response to institution of an anti-rheumatic drug after uncontrolled arthritic symptoms for many years substantiated this. Despite the striking elevation of uric acid in-

itially seen, his failure to respond significantly to indomethacin or phenylbutazone was more in keeping with rheumatoid arthritis than gout; however it is worth reiterating that occasional cases of chronic gout can be almost indistinguishable from rheumatoid arthritis. There was no explanation for the initial uric acid value which subsequently normalized on no specific hypouricemic therapy. There is day-to-day variation in serum uric acid values and in addition there is a circadian variation with afternoon values being higher. However the overall variation is usually no more than 1 mg% with either.

Case 8: T.P., a 44-year old male was seen on the day following a surgical procedure because of acute inflammatory swelling of his knees and left mid-foot. He related a relatively classical past history of gouty episodes and hyperuricemia. At the time of the development of this attack he was on no medications. Uric acid was 11.7 mg% but joint fluid aspirated from his knee earlier the same day by his private physician was reported by the hospital laboratory as showing a "normal uric acid level with no uric acid crystals seen." Fortunately a sample of that fluid had been saved and analysis by the author revealed typical urate crystals both intra- and extra-cellularly. The patient responded well to appropriate therapy.

Comment: In view of the past history, recent trauma of surgery while he was on no anti-inflammatory medications and the acute development of an arthritis consistent with gout at a time when marked hyperuricemia was present, the diagnosis seemed in little doubt. The phraseology on the laboratory slips indicated a certain lack of comprehension on the part of the laboratory technician and indeed when the same joint fluid was analyzed and was reviewed with him it became clear that he had never been instructed in proper joint fluid analysis. Uric acid levels in joint fluid should approximate those of serum or may actually be lower; however they have little or no value and should probably never be ordered. Uric acid crystals (as illustrated by the commonly-available wall charts for crystals found in the urine) are *not* present at the pH of body fluids whereas the crystals formed by the sodium salt, urate, are present. These have a totally different appearance and can be readily identified as in this case by a trained observer. Subsequently the author has made an effort to educate the laboratory technicians by showing them examples of urate crystals and leaving pictures of same posted in the laboratory.

Case 9: I.L., an 80-year old female was hospitalized because of a traumatic fall following which she developed inflammatory swelling of the right knee, unaccompanied by fever, local lymphangitis or other evidence of infection. Sixty-five cc of fluid was aspirated and the knee injected with 1 cc of hydrocortisone suspension. Joint fluid analysis revealed pyrophosphate crystals and knee x-rays showed calcification indicative of chondrocalcinosis. Serum uric acid level was normal and she responded excellently to the injection.

Comment: The development of an acute arthritis during hospitalization, and especially following trauma, as illustrated by case #8, usually suggests gouty arthritis but the physician must also consider pseudo-gout (now better known as CPPD crystalline deposition disease) as an alternative. The diagnosis is confirmed by the findings of pyrophosphate crystals in the joint fluid and bolstered by the finding of typical cartilage calcification on x-ray. Interestingly, about 30% of these patients will have elevation of serum uric acid levels and occasionally may respond well to colchicine. The treatment of choice is either local steroid injection and/or the use of an anti-inflammatory agent such as indomethacin or phenylbutazone. It has recently been suggested that a significant percentage (perhaps up to 40 or 50 per cent) of these patients will have normocalcemic hyperparathyroidism and it may prove worthwhile to obtain, if possible, immunoreactive parathyroid hormone levels. Certainly serum calcium, phosphorus and alkaline phosphatase should be obtained in all cases. An inflammatory monoarthritis may be in-

fectious and in other clinical settings it becomes an absolute necessity to rule out an infection by appropriate bacteriologic techniques.

Case 10: N.S., a 50-year old male was seen in consultation at Fairfax Hospital because of an acute inflammatory swelling of his right first MTP region. A similar attack three years ago had been treated successfully with phenylbutazone but subsequently he had developed peptic ulcer disease with gastrointestinal bleeding and regular dyspeptic symptoms since. He was begun on colchicine tabs 1 q 2 hours with the usual instructions (to be taken until relief occurs or nausea or diarrhea occur or a total of 12 tablets has been taken). He rapidly developed diarrhea with no relief of his foot symptoms. In view of the past documented history of peptic ulceration and frequent dyspeptic symptoms it was elected to treat him with intravenous colchicine and he received 1 mg in 20 ml of normal saline slowly IV with good relief of the inflammatory swelling in several hours. This was subsequently repeated on one more occasion later in the same day and by the following day the patient's acute episode was almost completely resolved.

Comment: This case illustrates the major indication for IV colchicine, inability to control an attack of gouty arthritis with oral colchicine or other medications and the need to attempt to bypass, at least in part, the gastrointestinal effects of oral colchicine.

Case 11: M.G., a 28-year old asymptomatic Ph.D. student was referred for control of "gout". Eight months previously he had noted pain and swelling in the right first metatarsophalangeal region while on a trip to Europe, at a time when he was both eating "rich" foods and on an extensive walking tour. He was able to continue wearing a shoe and walk, although with a limp. On his return to the United States a serum uric acid was found to be "in the range of 13", but he was taking low-dosage aspirin. Colchicine q 2 hours was begun and his symptoms *gradually* improved over the ensuing week. He related a vague history of chronic musculoskeletal symptoms, both in the low-back, hips, knees and one time had a skin rash which was thought to be psoriasis although by his description it sounded more like seborrheic dermatitis. Examination was unremarkable and his initial laboratory studies revealed only a minimal elevation of uric acid to 8.2 mg%. At the follow-up visit the situation was discussed in detail including the importance of a crystalline diagnosis and it was agreed that he would take no medical therapy but return routinely in four months for repeat uric acid, or return prn should he develop an acute inflamed joint. Negative follow-up thus far.

Comment: This last case, although not particularly dramatic, illustrates a practical problem faced in clinical practice. In the absence of an underlying cause (blood dyscrasia, enzymatic deficiency, glycogen storage disease, etc.) gout is distinctly unusual in patients below middle age. The patient's history was ambivalent but the rather long duration of his attacks, occurrence at a time of excess walking (therefore suggesting a mechanical cause) and sluggish response to colchicine are against clinical gout. It should be noted, however, that the response to colchicine becomes less and less dramatic as the duration of attack increases. Because of this patient's intelligence it was easy to discuss the potential ramifications and agree on the course of clinical observation only. With careful medical follow-up there could be little or no danger from the failure to diagnose gout (either hyperuricemia and/or episodic joint inflammation) and in the absence of a firm diagnosis it seemed unreasonable to commit a 28-year old man to daily therapy with a hypouricemic drug and, at least initially, with a prophylactic anti-inflammatory drug. Both probenecid (probably the agent of choice in "younger" patients in the absence of renal abnormalities) and allopurinol have proven to be quite safe in long-term use but especially with the latter we have no way of knowing whether adverse effects may occur after 10 or more years of therapy, since the drug has been in clinical use for only about that period of time. One must also con-

sider the difficulty in convincing an asymptomatic patient to take a daily medication which must be given at least twice per day, and the potential deleterious effects on this patient's own body-image in so doing. The practical decision to await further developments was facilitated by the cooperative and intelligent attitude of the patient.

Discussion

Rapid advances in the understanding of disorders of purine metabolism and especially the discovery of a molecular basis for one cause of hyperuricemia have stimulated interest in the pathophysiology of gout[2].

Occasional cases of gout secondary to an underlying disease state such as blood dyscrasias, hyperlactic acidemia of any cause, lead nephropathy and several hyperlipoproteinemias have given us further information on the regulation of purine metabolism (Fig. IV). The practicing physician, however, must utilize this new knowledge in a practical manner at his interface with the patient, and indeed care of the gouty patient has improved significantly over the last several decades. A recent and highly practical means of identifying urate crystals and differentiating them from pyrophosphates using an inexpensive red filter on the polarizing microscope has been described by Dr. Duncan Owen, Jr., of Richmond[3].

Basic mistakes such as treating an acute inflammatory episode with a hypouricemic agent (i.e., allopurinol or probenecid), or perhaps the even more dangerous mistake of masking inflammatory symptoms with chronic prophylactic use of colchicine unaccompanied by hypouricemic therapy still exists and hopefully will be eliminated by better education.

The eleven problem cases presented represent a few of the different facets of clinical evaluation and care of patients with gouty arthritis. Other pitfalls and dilemmas exist but, in general, they can be overcome by conscientious application of common sense and modern principles of therapeutics.

Fig. 4. Tophaceous involvement of the 2nd distal interphalangeal joint in a 24 year old woman, strongly suggesting a chronic underlying disease process. In this case a previously undiagnosed glycogen storage disease was found to be present.

Summary

Interesting problem cases in gout have been selected from the experience of a practicing rheumatologist in a community setting. These are presented to illustrate a variety of physiologic, therapeutic, psychologic and above-all practical aspects of care of the gouty patient.

Bibliography

1. Gutman, Alexander B.: The Past Four Decades of Progress in the Knowledge of Gout, With an Assessment of the Present Status. Arthritis & Rheumatism 16:431-445, July-August 1973.
2. Kelley, W. N., and Wyngaarden, J. B.: The Lesch-Nyhan Syndrome, in The Metabolic Basis of Inherited Disease. McGraw-Hill Co., New York, 1972, pp. 969-991.
3. Owen, Duncan S., Jr.: New Eng. J. Med. 285:1152, 1971, (letter to the Editor).

8301 Arlington Boulevard
Fairfax, Virginia 22030

The NBT Test in Bacterial and Non-Bacterial Pharyngitis

DONALD M. PORETZ, M.D.
Falls Church, Virginia

The nitroblue tetrazolium (NBT) dye test does not appear to be helpful in differentiating bacterial from non-bacterial pharyngitis. A throat culture remains the procedure of choice.

IT IS OFTEN QUITE DIFFICULT to differentiate between a viral and a bacterial pharyngitis. Clinical presentation is sometimes helpful, such as the presence or absence of rhinorrhea, or the presence or absence of painful anterior cervical adenopathy. The appearance of an exudate does not necessarily mean that a bacterial process is responsible for the illness, since viruses can also produce an exudate on occasion. A white blood cell count is often helpful in the differential diagnosis between a bacterial and a viral process but, again, this is not always diagnostic. For these reasons a throat culture is advocated as the most reliable way of determining the etiology of the pharyngitis. In recent years the nitroblue tetrazolium (NBT) dye test has been advocated as a simple laboratory procedure that can rapidly differentiate bacterial from non-bacterial infections.[1,2] If the NBT test could be applied to patients presenting with symptoms of a pharyngitis perhaps, then, one would not have to wait 24 hours for the result of a throat culture before starting therapy. This study attempts to correlate the presenting complaint of a sore throat with the NBT test value to see if such a conclusion is warranted.

Materials and Methods

All patients in this study were seen by the same group of physicians in a large family practice center. A total of 76 patients were evaluated. The patients ranged in age from four to 75 years, the majority being between the ages of 15 and 30. In each case the presenting complaint was a sore throat. Some patients additionally complained of other respiratory symptoms including rhinorrhea, ear discomfort, and cough; other patients complained of gastrointestinal symptoms, most commonly nausea and vomiting. On physical examination particular attention was paid to the presence or absence of an exudative pharyngitis. Oral temperature was recorded in all cases. A white blood cell and differential count was performed on every patient. Throat cultures were obtained on all patients and immediately streaked on sheep cell blood agar plates by the attending physician. All plates were read in 24 hours by the same bacteriologist; if beta hemolysis was present a bacitracin disc was used to determine if the organism was group A or not.

The NBT test was performed in a modification of the procedure described by Park.[1] Three milliliters of blood were collected in a plastic syringe and placed in a pediatric-sized heparinized tube allowing 75 to 100 units of heparin per milliliter of blood. 0.1 ml. of the heparinized blood was then immediately added to 0.1 ml. of the nitroblue tetrazolium dye. This was done in a sterile polystyrene culture tube and incubated at 37°C for 15 minutes and then at room temperature for 15 minutes. The material was then mixed well and peripheral smears made. The smears were allowed to air dry and were then counterstained with Wright's stain. The smears were examined under the microscope and 100 neutrophils counted. Those neutrophils with large opaque deposits of formazan were classified as NBT positive. The percentage of NBT positive cells was then determined.

Results

Of the 76 patients in this study 23 (30%) were shown to have a bacterial pharyngitis secondary to group A streptococci on the basis of throat cultures. The majority of the patients (53 or 70%) presumably had a nonbacterial cause accounting for their symptoms. Of the 76 patients examined, the clinician made the correct diagnosis 58% of the time. This is consistent with what has previously been reported in the literature.[3]

It has been variously reported that an NBT test value of greater than 10-15% is considered elevated. For the purpose of this study, and based on past experience at this hospital, an NBT value of greater than 12% was considered abnormal. Of the 23 patients with group A streptococcal pharyngitis, 15 (65%) had elevated NBT tests while eight patients (35%) had normal NBT values. Of the patients with non-bacterial pharyngitis, 15 (28%) had an NBT value that was elevated while 38 (72%) had NBT scores that were normal. (Fig. 1)

The white blood cell count was determined in all patients. Of the 23 patients with bacterial infections 17 (74%) had white blood cell determinations of greater than 10,000. On the other hand, 20 patients (36%) with nonbacterial pharyngitis had white blood cell counts of greater than 10,000. (Fig. 2)

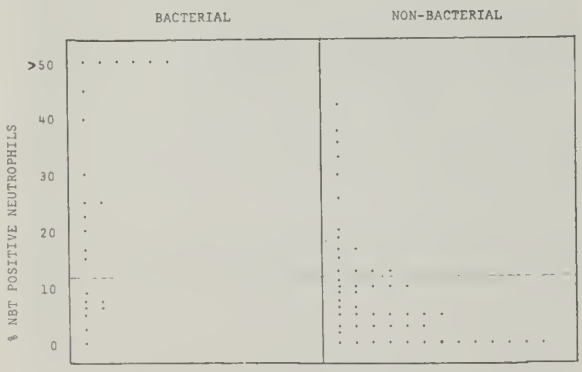


Figure 1: NBT test in bacterial and non-bacterial pharyngitis.

Figure 1.

Discussion

The NBT test was originally described in 1968 by Park.[1] This test is based upon the fact that polymorphonuclear leukocytes, in the presence of bacteria, possess the ability to reduce the pale yellow nitroblue tetrazolium dye to intracellular, water soluble, blue-black formazan crystals. Park proposed that bacterial infection could induce sufficient metabolic changes in neutrophils to result in spontaneous in vitro reduction of NBT dye. His original report suggested that NBT positive cells were significantly increased in bacterial infection when compared to normal individuals or patients with nonbacterial illnesses. After Park's original report several papers appeared in the literature which indicated a high correlation between bacterial infections and elevated NBT scores.[2] More recently, however, several reports have indicated that the NBT test may be abnormally elevated in many conditions. It has now been very well established that the NBT test can be falsely elevated in the neonatal period,[4] malaria,[5] various parasitic[6] and fungal infections, in subjects taking oral contraceptives,[7] in patients with Hodgkin's disease and other malignant lymphomas,[8] in patients undergoing active radiotherapy and hemodialysis,[9] during an acute myocardial infarction,[10] in various dermatoses,[11] and in miliary tuberculosis.[12,13,14]

The purpose of this study was to determine whether or not a positive NBT test is reason enough to start antibacterial therapy in a patient who complains of a sore throat. This study indicates that nonbacterial (presumably viral) causes of pharyngitis can elevate the NBT value. This study has also shown that patients with documented group A streptococcal pharyngitis may have normal or even low NBT values. On the other hand, although the majority of patients with nonbacterial pharyngitis have NBT values that are considered normal, a significant number may have elevated NBT values. These results are consistent with the findings of Randall, et al.,[15] who evaluated the NBT test in children with streptococcal pharyngitis. White blood cell determinations revealed similar findings. Patients with bacterial sore throats tend to have an elevated white blood cell count, although

this is not always the case and patients with non-bacterial sore throats quite often have elevated white blood cell counts.

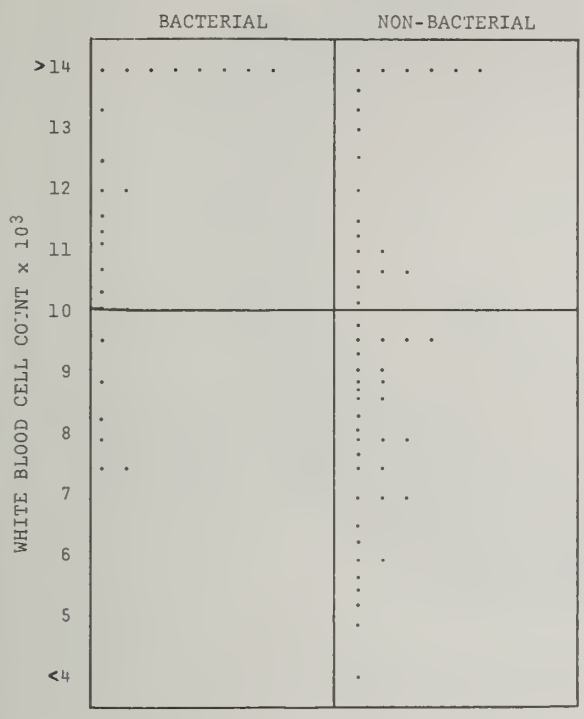


Figure 2: White blood cell count in bacterial and non-bacterial pharyngitis.

Figure 2.

It appears then that the routine use of the NBT test to differentiate bacterial from non-bacterial pharyngitis is not a helpful laboratory aide. Steigbigel[16] has recently shown that conventional hematology is more useful than the NBT test in the diagnosis of bacterial infections; this study shows that conventional bacteriology is likewise more useful than the NBT test. Until a procedure is developed that can rapidly differentiate bacterial from nonbacterial infections, a throat culture must be considered the procedure of choice.

The author wishes to thank the following people for help in this study: Dr. Alan Mackintosh and the Family Practice Center in Vienna, without whose help this study could not have been performed; Dr. Choong Park, for performing the bacteriological identifications; and Miss Gail Bryant, for performing the NBT tests.

Bibliography

1. Park, B.H., Fikrig, S.M., Smithwick, E.M.: Infection and Nitroblue Tetrazolium Reduction by Neutrophils. Lancet 2:532-534 (Sept. 7) 1968.
2. Matula, G. and Paterson, P.Y.: Spontaneous in Vitro Reduction of Nitroblue Tetrazolium by Neutrophils of Adult Patients with Bacterial Infection. N. England J. M. 285:311-316 (Aug 5) 1971.
3. Jackson, H., Cooper, J., Mellinger, W.J., et al: Streptococcal Pharyngitis in Rural Practice. JAMA 197:385-388 (Aug 8) 1966.
4. Humbert, J.R., Kurtz, M.L., Hathaway, W.E.: Increased Reduction of Nitroblue Tetrazolium by Neutrophils of Newborn Infants. Pediatrics 45:125-128 (Jan) 1970.
5. Pujol-Moix, M.N.: NBT Test in Malaria. Lancet 2:871-872 (Oct 16) 1971.
6. Chretien, J.H. and Garagusi, V.F.: NBT Test in Parasitic Disease. Lancet 2:549 (Sept 4) 1971.
7. Norden, C.W., and Reese, R.: Oral Contraceptives and NBT Test. Letter to the Editor, N. England J. M. 287:254 (Aug 3) 1972.
8. Chang, J.C., Appleby, J., Bennett, J.M.: Nitroblue Tetrazolium Test in Hodgkin's Disease and Other Malignant Lymphomas. Arch. Int. Med. 133:401-403 (March) 1974.
9. Campos, M.E., Rabinovich, S., Smith, I.M.: Nitroblue Tetrazolium Test. Arch. Int. Med. 133:432-436 (March) 1974.
10. Lauter, C.B., Khatib, M.R.E., Rising, J.A., et al: The Nitroblue Tetrazolium Test and Acute Myocardial Infarction. Ann. Int. Med. 79:59-62 (July) 1973.
11. Czarnetzki, B.M., Fountain, M., Belcher, R.W.: Nitroblue Tetrazolium Test in Dermatologic Patients. Arch. Dermatol. 109:36-39 (Jan) 1974.
12. Mandell, G.L. and Fuller, L.F.: Nitroblue Tetrazolium Dye Test: A Diagnostic Aid in Tuberculosis. Am. Rev. Respir. Dis. 105:123-125 (June) 1972.
13. Segal, A.W., Trustey, S.F., Levi, A.J.: Re-Evaluation of Nitroblue Tetrazolium Test. Lancet 2:879-883 (Oct 20) 1973.
14. Soonattrakul, W. and Anderson, B.R.: Diagnostic Accuracy of Nitroblue Tetrazolium Test. Arch. Int. Med. 132:529-532 (Oct) 1973.
15. Randall, J.E., Perriello, V., Hendel, J.O.: The NBT Test in Streptococcal Pharyn-

gitis. Abstract from Twelfth Interscience Conference on Antimicrobial Agents and Chemotherapy, 26-29 September 1972.
16. Steigbigel, R.T., Johnson, P.K., Remington, J.S.: The Nitroblue Tetrazolium Reduction Test Versus Conventional Hematology in the Diagnosis of Bacterial Infection. N. England J. M. 290:235-238 (Jan 31) 1974.

3300 Gallows Road
Falls Church, Virginia 22046

Regular Jogging Helps in Weight Reduction Program

It takes a lot of jogging to lose a little weight, but the jogger who keeps at it regularly can pare off the pounds, says a report in the (April 22nd) issue of the *Journal of the American Medical Association.*

The new study by a research team from the Air Force Academy in Colorado has worked out a chart showing the exact calory consumption involved in running approximately 1.5 miles, according to the weight of the runner and the speed with which he runs.

For instance, a 170-pound man running the distance in eight minutes would burn up 175 calories. Running slower, 16 minutes for the 1.5 miles, he would use 157 calories. A 120-pounder would use up fewer calories for the same exercise output; a 220-pounder would burn considerably more.

One finding of the study is that the jogger who putters along at an easy pace burns only a few less calories than the speedster who tears up the track. In the case of the 170-pounder, he used only 18 less calories at slow speed.

Of course, an expenditure of 3,500 calories is necessary to burn 1 pound of fat, and exercise alone can't do it. It still is necessary to count calories and adjust the diet. But, if a caloric expenditure of only 100 calories is maintained daily through exercise, there would be a 10-pound weight loss in a year, the researchers point out.

Synthroid®
(sodium levothyroxine)

Supplied: **Tablets:** 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded in bottles of 100, 500, and 1000.

Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, U.S.P., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent.

Synthroid-T4

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Who suffers more
when mother's child suffers from colic, diarrhea or similar malady?

Soyalac and new I-Soyalac can be an effective answer.

I-Soyalac from isolated protein without corn.

I-Soyalac and regular Soyalac is palatable, readily digestible and assimilated. It simulates human milk in appearance, taste and texture. It is complete with vitamins and minerals. It is suitable for infants and children who are sensitive to or cannot tolerate cow's milk.

For nearly a quarter of a century, Soyalac has proven its value—in promoting growth and development—as proven by extensive clinical data.

Available in four forms: • I-Soyalac Concentrated • Soyalac Concentrated • Soyalac Ready-to-Serve • Soyalac Powder.

send to: Loma Linda Foods
Medical Products Division
Riverside, Calif. 92505

Please send me free sample and literature.

Name _____

Address _____

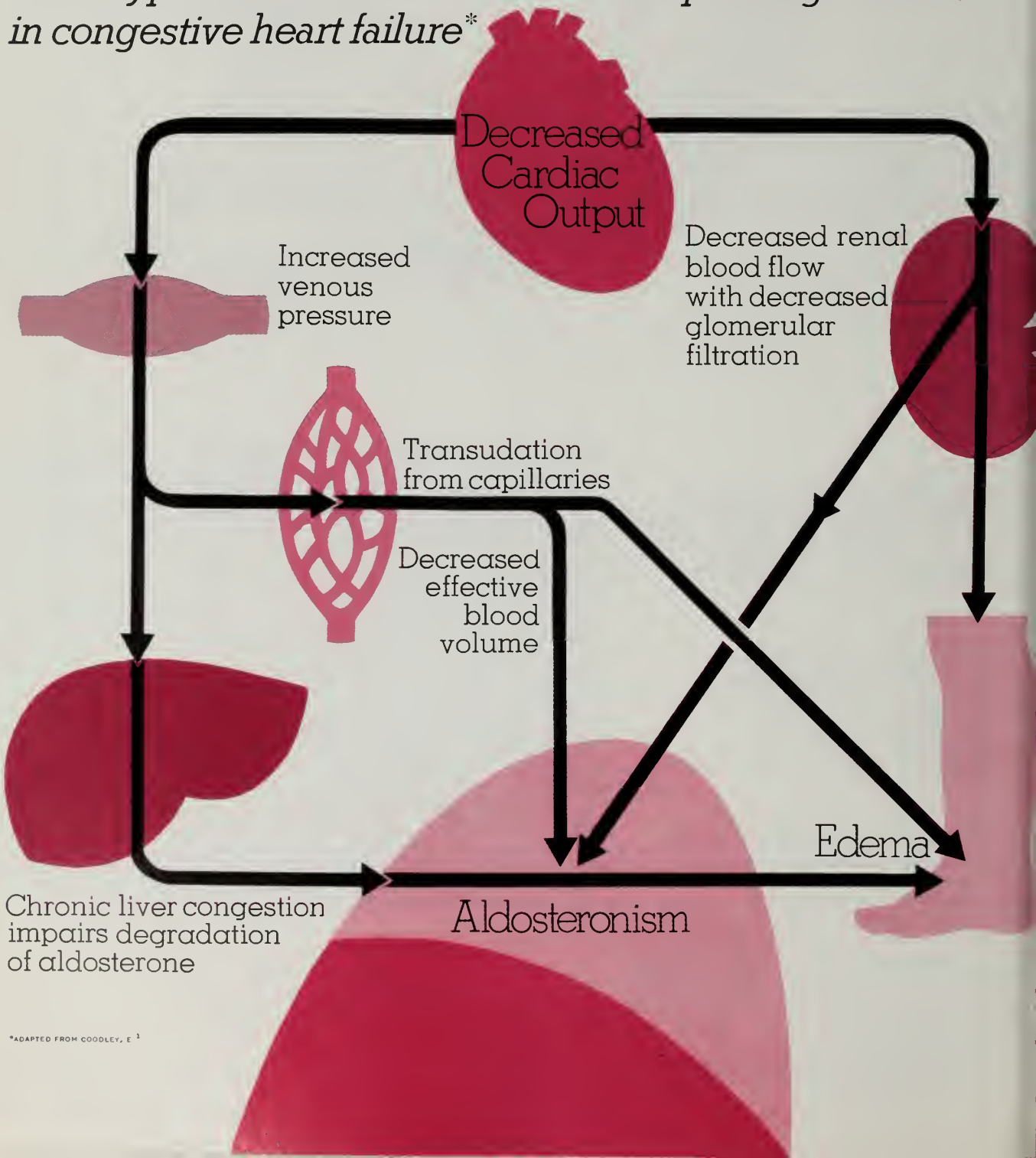
City _____ State _____ Zip _____

Or a simple note on your prescription form will do.

In congestive heart failure...

secondary aldosteronism

*How hyperaldosteronism leads to and prolongs edema in congestive heart failure**



*ADAPTED FROM GOODLEY, E [1]

s a primary factor

To "switch off" the aldosterone factor in congestive heart failure

Aldactone

rand of

spironolactone 25-mg. tablets

the only specific aldosterone antagonist... basic in all diuretic therapy

Three ways to use Aldactone in congestive heart failure

. As the only diuretic

- Often sufficient alone.
- Produces gradual, sustained diuresis by locking aldosterone action in the distal enal tubule.
- Avoids potassium loss.

. As the basic daily diuretic with an "add-on" lternate-day-diuretic ("A.D.D." schedule)

- Can be administered daily as basic herapy with the additional agent urosemide or ethacrynic acid) given very second or third day.
- Aldactone plus "A.D.D." schedule inimizes potassium deficiency and otentiates effect of "add-on" diuretic.[2]
- Avoids acute volume depletion and ldosterone rebound.[2]

. As a daily diuretic in combination with daily dose of a thiazide

- Permits daily additive diuretic effect hile maintaining potassium balance.

Indications—Essential hypertension, edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome, idiopathic edema. Some patients with malignant effusions may benefit from Aldactone (spironolactone), particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops. **Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.**

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 percent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, inability to achieve or maintain erection, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For **essential hypertension** in **adults** the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient.

For edema, ascites or **effusions** in **adults** initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For **children** the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight.

References: **1.** Coodley, E. Consultant 12:106-107, 109, 111, 113, 115 (July) 1972. **2.** Thorn, G. W., and Lauler, D. P. Am. J. Med. 53:673-684 (Nov.) 1972.

SEARLE Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department
Box 5110, Chicago, Illinois 60680

311

Healing nicely but it still HURTS

EMPIRIN COMPOUND c̄ CODEINE

#3, codeine phosphate* (32.4 mg.) gr.
#4, codeine phosphate* (64.8 mg.) gr.

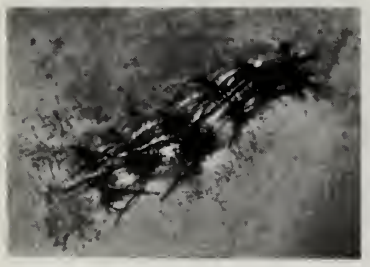
HERE

Burns

When parenteral analgesia is no longer required, Empirin Compound with Codeine usually provides the relief needed.

HERE

Sutures



Empirin Compound with Codeine is effective for visceral as well as soft tissue pain—provides an antitussive bonus in addition to its prompt, predictable analgesia.

prescribing convenience: up to 5 refills in 6 months, at your discretion (unless restricted by state law); by telephone order in many states.

Empirin Compound with Codeine **No. 3,** codeine phosphate* 32.4 mg. (gr. ½); **No. 4,** codeine phosphate* 64.8 mg. (gr. 1). *Warning—may be habit-forming. Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Cancer Trends....

Edited by—

WALTER LAWRENCE, JR., M.D.
Richmond, Virginia

J. SHELTON HORSLEY, III, M.D.
Charlottesville, Virginia

Epidermoid Carcinoma of the Anus

GERALD T. GOLDEN, M.D.
J. SHELTON HORSLEY, III, M.D.

Epidermoid carcinoma of the anus is an uncommon cáncer, accounting for fewer than 5% of all neoplasms of the distal 18 cms. of large intestine. At the University of Virginia Medical Center, 26 patients with epidermoid carcinoma of the anus were treated between 1945 and 1969. During the same period of time, 657 cases of rectal adenocarcinoma were treated, an incidence of 3.8%. The disease was more common in females, and most of the patients were in their 5th and 6th decades.

Rectal bleeding is the presenting complaint in the majority of patients, although some patients complain of pain or the sensation of a mass in the anal region. It is worth noting that the symptoms often have been present for months to years when the diagnosis of cancer is made. In about 15% of the patients, a benign anorectal disorder such as hemorrhoids, fissure or fistula has been diagnosed and symptomatic treatment instituted by a physician. For this reason, some investigators believe that chronic anal irritation may predispose to epidermoid carcinoma, but its true role is difficult to assess. Anorectal symptoms are common in the general population, and the occurrence in many cases may be coincidental. Moreover, it is difficult to assess which symptoms are due to an antecedent benign lesion and which due to a long-standing, slow-growing epidermoid carcinoma of the anus.

Most lesions are histologically epidermoid, exhibiting keratinization with varying degrees of anaplasia. Occasionally, a distinct histologic pattern appears, involving peripheral palisading of cells resembling basal cells with keratinization only at the center of the lesions. These lesions are believed to arise from cells of an anal membranous remnant of the embryonic cloaca at the point of fusion of endoderm and ectoderm. These lesions have been called by several eponyms, including basaloid carcinomas, transitional cell carcinomas, and cloacogenic carcinomas. It has been suggested that this "subtype" of epidermoid carcinoma may carry a slightly better prognosis.[1,2] The data are currently insufficient to make a definitive statement in this regard. However, several reports have emphasized the biologic aggressiveness of these lesions[3,4,5] and basaloid carcinomas should be treated exactly the same as the standard variety of epidermoid carcinoma.

Clinically a firm indurated plaque is usually present in the anal canal or perianal region. Ulceration of these lesions is common and accounts in part for symptoms of rectal bleeding. On occasion, a nodular or papular tumor

From the Department of Surgery, University of Virginia Medical Center, Charlottesville.

GOLDEN, GERALD T., M.D., *Clinical Fellow, American Cancer Society, July 1, 1973—June 30, 1974*

Sponsored by the Professional Education Committee Virginia Division, American Cancer Society

may be present. Rarely, the diagnosis is made incidentally by microscopic examination of tissue excised during hemorrhoidectomy or surgical treatment of other benign anorectal disorders. Larger lesions may completely encircle the anal canal and cause obstruction of the distal colon. Three-quarters of the lesions arise within the anal canal, and the remainder arise in the region of the anal verge.[4] Inguinal lymph adenopathy may be present and secondary to metastasis of the cancer or chronic inflammation.

Epidermoid carcinoma of the anus spreads by local extension, lymphatic metastasis to regional lymph nodes and hematogenous metastasis to distant sites. Locally, there is early invasion of the external sphincter muscles, with extension into the perirectal fat laterally and into the rectum above. In long-standing cases, the lesion may extend to the posterior vaginal wall in the female or base of the bladder and prostate in the male. The lymphatics of the anal canal drain to two groups of regional nodes. Those of the anal verge and lower anal canal pass subcutaneously across the perineum and inner thigh to the medial superficial group of inguinal lymph nodes. Those of the upper anal canal and the pectinate line drain to the obturator nodes, and ultimately to the hypogastric and periaortic nodes (the lateral and lower zone of Miles). There are many communications between the different lymphatics of these two areas through subdermal and intramural lymphatic channels.[6] Metastases occur to mesenteric nodes in 33% of the cases. Mesenteric node involvement is more frequent with lesions of the anal canal in the region of the pectinate line, but may occur with cancers of the anal verge.[8,9] Metastases to inguinal nodes ultimately occur in 30% of the patients. Hematogenous metastases to the liver and distant sites are relatively uncommon, occurring in roughly 7% of all patients.

Approximately 7% of the patients are incurable when first examined, as evidenced by distant metastasis discovered on physical examinations or at laparotomy. Local excision of epidermoid carcinoma of the anus has been advocated by some surgeons for the treatment of smaller lesions and those located on the anal verge. In theory, these lesions should be more readily curable than those treated by more radical procedures. This form of treatment should only be used in patients who have lesions smaller than 2 cm. in diameter located on the anal verge, with a favorable histologic grade of malignancy, and who can be followed closely by their surgeons. Abdominoperineal resection remains the treatment of choice for most lesions amenable to surgical therapy. This procedure should include early ligation of the lymphatic and blood supply to prevent spread attendant with manipulation of the primary tumor. In addition, the surgical specimen should include the external iliac, hypogastric and obturator lymph nodes and a wide margin of perianal fat with the levator ani muscles. In a collected series of 600 patients, more than 50% survived five years with surgical therapy. Large lesions and those with a high grade of malignancy were associated with a poorer prognosis, but salvage of some patients is possible.

The treatment of inguinal metastases in this disease has been discussed widely in the surgical literature. Our approach to inguinal metastasis is based on a recent review of our own experience and an extensive review of the literature.[9] If clinically suspicious inguinal nodes are present at the time of the primary operation, periaortic node biopsy is performed at the time of abdominoperineal resection to exclude unresectable disease. If the periaortic nodes are free of metastases, we perform abdominoperineal resection with removal of the external iliac, hypogastric and obturator nodes. Inguinal node dissection is then performed bilaterally, six weeks following abdominoperineal resection. Although our own results have been discouraging with synchronous inguinal metastasis,[9] the reports of others indicate that an occasional patient may be salvaged.[7,10] If the inguinal nodes are clinically negative, an abdominoperineal resection with external iliac, hypogastric and obturator node dissection is done, but without inguinal node dissection.

The patient should be examined at three-month intervals during the first two years post-operatively, because most inguinal metastases will become apparent during this period of time. If inguinal nodes subsequently become involved, an effort should be made to exclude distant spread. If one suspects metastases to distant organs based on liver scan or enzyme profile, this possibility should be excluded prior to performance of further extensive surgery. Lymphangiography may be of help if iliac and periaortic nodal involvement is suspected because of extensive inguinal nodal involvement. In the absence of distant spread or prohibitive medical disease, inguinal node dissection should be performed on the clinically involved side. The overall survival for this group of patients is gratifying; more than 50% survive five years.[9,10,11] We believe that prophylactic inguinal node dissection is unwarranted. If this procedure is performed on all patients, 70% will have an unncessary operative procedure. Moreover, the procedure carries considerable morbidity, especially delayed wound healing and lymphedema of the lower extremity.

Recurrence of disease in the perineum is not always indicative of incurable disease. Some patients may be salvaged by radical excision of a recurrence, if only local excision was used to treat the disease initially.

Radiotherapy and chemotherapy have a very important role in the treatment of the unfortunate patient with metastatic or recurrent disease beyond the scope of surgical excision. Radiation is also used in the rare patient who refuses surgery or is a prohibitive anesthetic and surgical risk because of a medical illness.

Summary

Although extreme skepticism regarding the survival of patients with epidermoid cancinoma has been expressed, our own experience and that from other institutions indicate that with appropriate therapy more than 50% of these patients can be cured by appropriate, aggressive surgical management. As with many forms of cancer, earlier diagnosis and treatment will result in greater survival. Indolent "benign" anorectal pathology should be regarded with suspicion, and a proper biopsy performed.

Bibliography

1. Lane, F., Berg, J. W. and Stearns, M. W.: Basaloid Tumors of the Anus. Cancer 13:907, 1960.
2. Harrison, E. G., Beahrs, O. H. and Hill, J. R.: Anal and Perianal Malignant Neoplasms: Pathology and Treatment. Dis. Colon & Rectum 9: 255, 1966.
3. Klontz, R. G., Pamukcoglu, T. and Souilliard, D. H.: Transitional Cloacogenic Carcinoma of the Anal Canal. Cancer 20: 1727, 1967.
4. Martin, R. G., Miller, J. S. and Thorpe, R. G.: Treatment of Squamous Cell Carcinoma of the Anus. In *Cancer of the Gastrointestinal Tract*, a collection of papers presented at the Tenth Annual Clinical Conference on Cancer at the University of Texas, M. D. Anderson Hospital and Tumor Institute, Houston. Chicago, Year Book Medical Publishers, 1965, p. 175.
5. Morson, B. C. and Pang, L. S. C.: Pathology of Anal Cancer. Proc. Roy. Soc. Med. 61: 623, 1968.
6. Miles, W. H.: Pathology of Spread of Cancer of the Rectum and its Bearing on Surgery of the Cancerous Rectum. Surg. Gynec. Obstet. 52: 350, 1931.
7. Dillard, B.M., Spratt, J. S., Ackerman, L. V. and Butcher, H. R.: Epidermoid Cancer of the Anal Margin and Canal. Arch. Surg. 86: 772, 1963.
8. Sawyers, J. L., Herrington, J. L. and Main, F. B.: Surgical Considerations in the Treatment of Epidermoid Carcinoma of the Anus. Ann. Surg. 157: 817, 1963.
9. Horsley, J. S., III, and Golden, G. T.: The Surgical Management of Epidermoid Carcinoma of the Anus. To be published.
10. Stearns, M. W. and Quan, S. H. Q.: Epidermoid Carcinoma of the Anorectum. Surg. Gynec. Obstet. 131: 953, 1970.
11. Wolfe, H. R. I.: The Management of Metastatic Inguinal Adenitis in Epidermoid

Cancer of the Anus. *Proc. Roy. Soc. Med.* 61: 626, 1961.

EDITOR'S COMMENT

As the authors have pointed out, this type of cancer is infrequent. The striking feature is the chronicity of the complaints. The detection of this type of cancer at an early stage of its development requires all physicians to be aware of this possibility whenever they see a patient with long-standing anorectal complaints.

Clinical Center Study of Patients with Metastatic Breast Cancer

The cooperation of physicians is requested in the referral of patients with breast cancer for studies being conducted by the National Cancer Institute's Medical Breast Cancer Service at the Clinical Center, National Institutes of Health, Bethesda, Maryland. These studies involve investigation of hormone, hormone plus chemotherapy, and chemotherapy manipulations are underway.

All patients with disseminated breast cancer will be considered for entrance to the program if they are:

1) less than 70 years of age
2) have received no prior chemotherapy
3) have no complicating medical diseases
4) have measurable disease (bone disease is considered measurable under most circumstances; however scan evidence alone is not considered measurable disease).

Patients considered for hormone ablative procedures could have those procedures performed either at the Clinical Center or by the referring physician. Patients may withdraw from the program upon request by the individual or the referring physician.

Physicians interested in further details and in having their patients considered for admission may write or telephone: Douglass C. Tormey, M.D., Ph.D., Chief, Medical Breast Cancer Service, National Cancer Institute, Building 10, Room 6B-02, Bethesda, Maryland 20014.

Medical Grand Rounds . . . .

From The Medical College of Virginia

Diagnosis of Hemoglobinopathies

Edited by:

ROBERT B. SCOTT, M.D.
EMMETT C. MATHEWS, JR., M.D.

Dr. Robert Scott: The subject of this grand rounds will be "what's new in hemoglobins", especially what is new that effects you and your practice. A lot of new knowledge has been recently derived about hemoglobins. It comes from two sources. One is these mass testing programs which screen young people for sickle trait and also find many other hemoglobins. Another has been the increased interest in hemoglobinopathies over the last few years, including a lot of political interest which led to legislation called the Sickle Cell Prevention Act of 1972. With all this increased interest, and the increased testing, have predictably come *increased standards of diagnosis*, more meticulous diagnosis of sickling disorders, and more expectation of the physician in diagnosing them and particularly being able to explain them to the patient. As we test for more genetic differences between individuals we will find many, and this generates the responsibility of the physician for explaining them to the patient.

The interesting and unique aspects of hemoglobins and hemoglobinopathies have been previously the province of the researcher or of some specialist interested in hemoglobins. But, one thing I want to get over today is that the understanding of even relatively rare hemoglobin genes becomes important because of mass screening.

Presented at Medical Grand Rounds on April 2, 1974, at the Medical College of Virginia, Health Sciences Division, Virginia Commonwealth University.

The major objective of this conference is to make you familiar with the diagnostic criteria and diagnostic techniques which are becoming the standard of practice in hemoglobinopathies. We must also add the diagnosis of Beta thalassemia to the list.

TABLE I

DIAGNOSTIC TESTS FOR HEMOGLOBINOPATHIES AND THALASSEMIAS

1. Alkaline Electrophoresis: Cellulose acetate at pH 8.4
2. Sickle Cell Prep or Solubility Test
3. Acid Electrophoresis: Citrate Agar, pH 6.2
4. Quantitative Determination of Hemoglobin A_2
5. Slide Elution Test for Hemoglobin F

Table I shows the diagnostic tests that I want you to keep in mind. This is laboratory testing for hemoglobinopathies. In addition, one needs a family study to add to this in many cases. But in terms of the tests you have to order, we start first with the *electrophoresis on cellulose acetate*. It is *alkaline* electrophoresis, at pH 8.4 and this is the standard technic for electrophoresing serum proteins or hemoglobin. It separates hemoglobin then in the familiar order of A,F,S, and C.

The second test that is necessary is the sickle cell prep, or what is being used frequently now, a *solubility test* for sickling. The solubility test is another test which tells you just what the sickle prep does, simply yes or no, sickling is present or absent.

The third test is an *acid electrophoresis* technic called *citrate agar electrophoresis*. This unfamiliar type of electrophoresis is becoming

necessary to distinguish uncommon hemoglobin genes from those that are more common.

The next test is a quantitative A_2 determination. We are thinking about Beta-thalassemia. Hemoglobin A_2 is a small fraction normally, less than 3½% of the total hemoglobin and the increase is diagnostic of Beta-thalassemia trait. Cellulose acetate electrophoresis is not usually sensitive enough to detect a slight increase in A_2 hemoglobin. We have missed a lot of thalassemia traits because we do not routinely do a quantitative A_2 test.

The *slide elution test* is a test that sounds simple but is difficult to standardize. This test is important in making a diagnosis of a fairly common gene, *Hereditary Persistence of Fetal Hemoglobin* (HPFH).

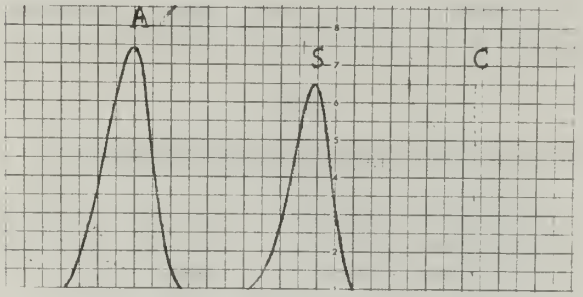


Figure 1

Now to go on to the application of these tests. Figure 1 shows a densitometer tracing taken from a cellulose acetate strip. This sample separated into two bands, one of which migrated in the usual position of hemoglobin A, the other migrating in the position of hemoglobin S. There is slightly more A than S. But can we call it sickle trait? No, not yet, because we have not done the sickle prep or solubility test. So on this blood we do a sickle prep and if it sickles we say it it sickle trait. Suppose it does not sickle? What have you got? There are several hemoglobins that migrate the same as S. Two of these are not exceedingly rare and they would be D or G hemoglobin. You need to know about D and G hemoglobin because you will run into that now and then.

To separate D or G hemoglobin from S hemoglobin requires *citrate agar electrophoresis* at pH 6.2. Under those conditions S migrates differently from D or G. We do this whenever we have an apparent A and S electrophoresis but a negative sickle prep. It should also become routine in diagnosing sickle cell anemia, because an apparent homozygous S could in reality be a carrier of S and D genes, thus hemoglobin S-D disease, a milder disorder.

Although in the case of hemoglobin C, there are other rare hemoglobins which migrate similarly on electrophoresis (especially O and E), we do not worry about calling an electrophoresis C trait if the pattern looks like A and C. If, however, there is an apparent homozygous C or an SC pattern, we do routinely send blood for citrate agar electrophoresis, which again separates the unusual from the more common types.

Citrate agar electrophoresis is presently available by sending blood to the Hemoglobin Reference Laboratory at the Center for Disease Control in Atlanta.

When we say we do a sickle prep, in our laboratory we actually are doing a *solubility test*. We are not looking through the microscope to see the sickle cells. We do a solubility test which is described in Table II. This is a test that takes advantage of the fact that sickle hemoglobin is relatively insoluble in certain buffers. It is more insoluble than A or any others. If you put a sickle hemoglobin solution into a concentrated phosphate buffer, it will precipitate and become cloudy. To make a simple test with a drop of blood you have a solution containing a concentrated phosphate buffer and a little dithionite to reduce the oxyhemoglobin to deoxyhemoglobin so it may

TABLE II

SOLUBILITY TEST FOR SICKLING

Reagent:	Concentrated phosphate buffer Detergent (to lyse erythrocytes) Dithionite (to deoxygenate hemoglobin)
Result:	Cloudy: POSITIVE Clear: NEGATIVE
Interpretation:	Exactly like the sickle prep, a yes or no answer

sickle and a detergent to lyse the red cells. The most commonly used one of these is called Sickledex and is marketed by Ortho Laboratories. You drop a measured drop of blood in and if it gets cloudy it is positive. That sounds very simple. It takes a very short period of time and you do not need a microscope in your office. The problem is that it is a little hard to read and we have seen a lot of errors. A lot of errors, both false positives and false negatives, are made. You want someone who does them regularly and watches them very carefully. If you are careful you can make this a good test. If we are worried about the result, we do a sickle prep which is still the most accurate when done carefully. The Sickledex test costs $ .50 per test. The sickle prep can be done much more cheaply if you own a microscope. It will be useful to you in your office when you have a patient who is anemic and a little jaundiced and you want to quickly rule sickling as part of the problem.

On every electrophoresis that contains a non-A hemoglobin, we do a Sickledex test. It used to be said that you would do a sickle prep, and if it is positive do an electrophoresis. This procedure has been reversed but for different reasons than you might think. In screening for genetic counseling you have to find more than the sickle trait carrier. You have to find the C trait and other less common traits. If you simply screen with a sickle prep before doing electrophoresis, you will miss everything that is not sickling. Nowadays, with electrophoresis available free to the patient, begin with electrophoresis and, if abnormal, use the sickle prep or solubility test to prove that the hemoglobin that migrates like S really causes sickling. If you find a tracing like Figure 1 and the blood sickles, that is sickle trait. There are two bands, hemoglobin A and something that migrates like S and the blood sickles. We call that sickle trait.

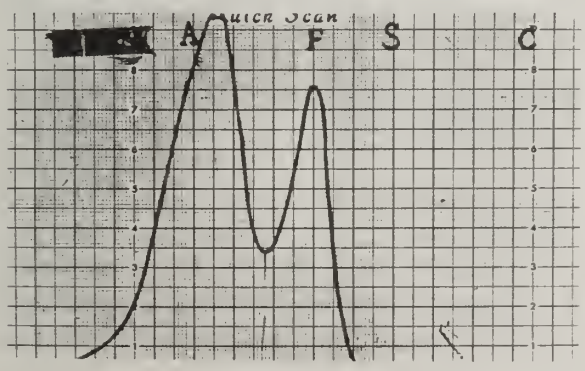


Figure 2

Sickle trait occurs in about 8% of the Negro population. Next in frequency is hemoglobin C trait, found in 2%. The third most common hemoglobin gene is illustrated in Figure 2. In this there is a large amount of A hemoglobin and a somewhat smaller amount of F. Now what is this? Well, newborns have a lot of fetal hemoglobin, so it could be a newborn. But if I told you this is a healthy 30 year old man, what would be your next most likely diagnosis? This sample is about 40% F and 60% A. You would say probable *Hereditary Persistence of Fetal Hemoglobin.*

This is not rare. This gene produces a problem not of disease but of patient understanding and at times, physician understanding. There are a lot of people in Virginia who have hemoglobin F trait or Hereditary Persistence of Fetal Hemoglobin (HPFH). The hemoglobin F concentration is usually about 20-40% (Table III).

TABLE III

HEREDITARY PERSISTENCE OF FETAL HEMOGLOBIN

Incidence:	2-3/1000 Blacks
Diagnosis:	Increase in Hgb. F (usually 20-40%) Absence of hematologic disease Confirmed by Slide Elution Test
Significance:	No clinical significance

There is no hematological disease associated with HPFH. Here you have a patient who comes from the lab and says "They tell me something is wrong with my blood, what kind of sickness do I have?" and your job is to try to explain to him that he does not have any sickness. Try to convince him that he merely has a different gene. That is not as easy as it seems, when people have heard a great deal about sickling and fatal disease and the "big killer". HPFH is finally confirmed by the *slide elution test*—that is another test we

wanted to talk about. If the hemoglobin F level is over 20%, it is certainly going to be Hereditary Persistence of Fetal Hemoglobin. The real problems arise when you have lesser amounts of F because in many hematologic diseases, you can get a compensatory increase in F synthesis. Like in sickle cell anemia or in many chronic anemias, you may have 10 or 12% fetal hemoglobin. How do you tell that from a hereditary disorder of hemoglobin F production? The slide elution test is very useful. The test consists of simply taking a blood smear, fixing it with alcohol and then dropping it in a buffer which elutes from those red cells all hemoglobin except fetal hemoglobin. In a normal person it washes out everything in the slide and then you stain it and see nothing but red cell ghosts. If you have fetal hemoglobin in those cells and you stain it you will stain the remaining protein and you will see dark cells. The important thing to remember is that in the gene for hereditary persistence of F there is a *uniform distribution of F throughout every cell.* In all other conditions where you have a compensatory increase in F like sickle cell anemia, or thalassemia, or chronic anemia, you will always have a non-uniform distribution of F.

Now let us turn to Figure 3. Here we have an electrophoresis showing something between

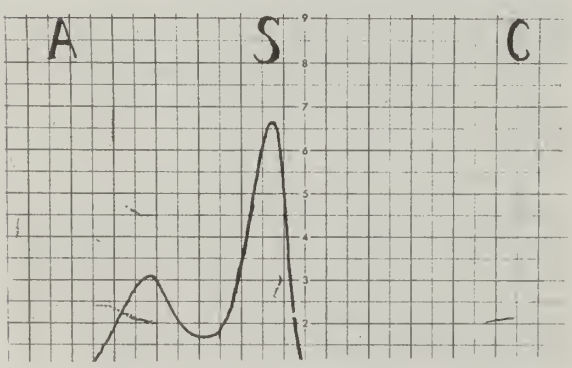


Figure 3

A and S, like F, and we have something that looks like S. This is a sample from a child tested in a screening program elsewhere. The lab reported an S-F pattern and called sickle cell anemia. The doctor told the child that the child had sickle cell anemia. The mother did not believe this because the child had never been sick and was not anemic. The mother then brought the family to our clinic and said, "I don't believe this, can you check it again?" We found this pattern and a normal hemoglobin level. The sickle prep was positive. Actually it is a double heterozygote for S and F and the child does not have sickle cell anemia. You see the kind of problems we run into at the present time because of lack of understanding of this fetal hemoglobin trait.

The next subject to make you aware of, and more concerned about, would be thalassemia. When we read about thalassemia as medical students, we heard about Cooley's anemia or Mediterranean anemia, and we learned about its occurrence in Italians, Greeks, and Italian-American. In Virginia we do not have large Mediterranean-American populations, and we do not see much Cooley's anemia. The point for today is, however, that Beta thalassemia trait is common in Virginia and you will see it when you understand it and look for it.

In the Negro population in this country there are genes for Beta thalassemia (Table IV). I use the plural because there are probably many different thalassemia genes throughout the world. When we talk about hemoglobin S we are talking about hemoglobinopathies, abnormal structure of molecules. When we talk about thalassemia we talk about control genes, controlling the rate of synthesis of a peptide chain. In this case we are talking about the beta chain of the hemoglobin molecule. The gene is defective in that it does not

TABLE IV

Beta Thalassemia in Negroes

Incidence:	About 0.5%
Diagnosis	Elevated A_2 hemoglobin (3.5-10%) Hypochromic microcytic erythrocytes Basophilic stippling Slight anemia
Significance:	Homozygous state results in relatively mild thalassemia major. Two types of Sickle-thalassemia denote at least two B-thal genes (thal+ and thal^0)

allow normal synthesis of the molecule. Beta thalassemia in Negroes occurs in about 0.5% incidence. We are missing a lot of them because we do not easily pick up the elevated A_2 hemoglobin, which is diagnostic. If you could screen the population with a quantitative A_2 test, you would pick up virtually all of them because of this elevation of A_2 hemoglobin, between 3½% and about 10% is diagnostic of Beta thalassemia trait.

These trait carriers are mildly anemic at times, and they have some basophilic stippling in their red cells (due to the extra alpha chains that do not have a beta chain to hook up to). These extra chains denature and precipitate as stipples in the red cells. The picture looks like iron deficiency anemia but the serum iron is normal. The iron stores are normal. The patient has anemia of mild degree with sometime severe microcytosis. The red cells indices show a low mean corpuscular volume and low mean corpuscular hemoglobin. When you study the patient, you will find an elevated A_2 hemoglobin. That makes your diagnosis. In the Negro population, the homozygous state analogous to Cooley's anemia or thalassemia major is a milder disorder. It is very uncommon because the gene is not that common. A case of thalassemia major was reported by Dr. Harold Maurer several years ago from this institution and the patient was not severely affected like Mediterranean thalassemics. This is true of other cases that have been reported in Blacks. The thalassemia trait carrier just has a mild anemia. It will not respond to iron so a lot of these people are found to be individuals who have hypochromia that does not respond to iron. Then the correct diagnosis is made.

There are at least two thalassemia genes we can identify because two different sickle-thalassemia pictures present to us. Two clinical pictures that are quite different, therefore, there are two genes for thalassemia and we call them the thal+ (thal plus) and the thal^0 (thal naught). Remember the plus is associated with synthesis of A hemoglobin, the thal naught means total suppression of A synthesis. The patient with the thal naught genes has from one parent the thalassemia trait and from the other parent a sickle trait and has sickle-thalassemia with only S hemoglobin present because all the A hemoglobin is suppressed by this gene and it looks like sickle cell anemia. Conversely, in the thal plus gene, some A hemoglobin synthesis is still going on. It is not totally suppressed. You get a picture where there is S hemoglobin from one parent and from the thalassemic parent the gene which is defective but still determines the synthesis of some A. We find more S than A, *unlike sickle trait, which was always A more than S.* There is more S than A hemoglobin and you also have some F. So you get a pattern here that we call the SAF pattern.

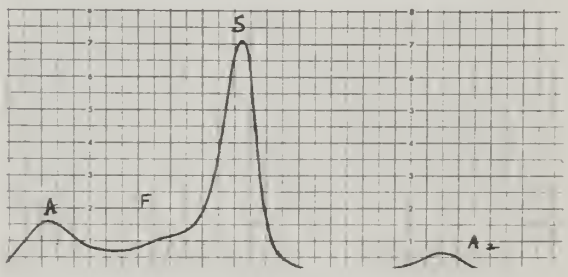


Figure 4

Figure 4 shows an SAF pattern. If you see a patient who has lots of S and a little bit of A, there are only two possibilities. One is the sickle cell anemia patient who has been transfused with A hemoglobin, the other is sickle-thalassemia of the thal+ gene variety. We may see an elevated A_2 when we have sickle-thal. We see a lot more sickle thal than homozygous thalassemia as you can imagine. This patient here is nearly completely asymptomatic. He is a patient that is as healthy looking as anyone around. He had a hemoglobin of 13 grams, a high retic count because he is hemolyzing but compensating, had never been sick in his life, and simply went to his doctor to get a sickle test. We diagnosed sickle-thalassemia. He may have very little problem throughout his life. The clinical syndrome is very mild in this form of sickle thal.

Figure 5 also shows a sickle-thalassemia, but here there is only S and a little F. The pattern

is indistinguishable from homozygous sickle cell anemia. You would diagnose sickle-thal because in the family study one parent does not have sickle trait. The other parent does.

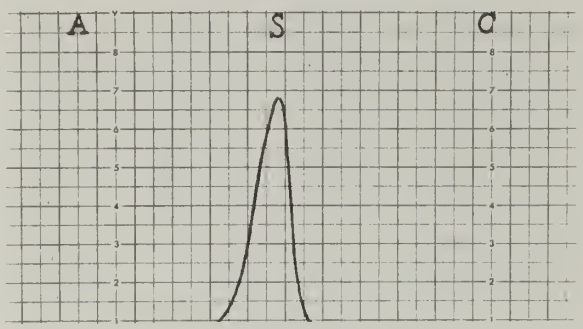


Figure 5

That parent who does not have sickle trait has an elevated A_2 hemoglobin and microcytosis and hypochromia. This is sickle-thalassemia, not sickle cell anemia. It looks like sickle cell anemia and its clinical features are very much like ordinary sickle cell anemia because there is nothing but sickle hemoglobin there. The patient has sickle thalassemia of the $thal^0$ variety.

It is evident from the foregoing that the diagnosis of hemoglobinopathies is becoming somewhat more complex as more is being expected of us. In Virginia there are at least two laboratories from which assistance can be obtained. One is the State Health Department Laboratories. They have a capacity of 40,000 electrophoreses yearly, and accept blood from any age patient submitted on filter paper disks. The other is the Virginia Sickle Cell Anemia Awareness Program (VaSCAP) at MCV/VCU, a program of the Hematology Division. This is located at 1008 East Clay Street in Richmond and accepts samples, mostly from central Virginia, from patients in the childbearing age. We have a special interest in premarital samples, and encourage those to be sent from anywhere in the State. We accept samples obtained with any anticoagulant. We, or the State Health Department can also serve as a conduit to get samples to Atlanta for further testing as indicated.

The new knowledge and new standard of practice in diagnosing hemoglobinopathies produces new responsibilities for the physician. I might conclude by simply saying that new responsibilities are not all bad because with them come a great demonstration of the fascination of new knowledge in clinical science. Thank you.

Dr. Emmett C. Mathews, Jr.: Are there any questions? What do we tell a 16 year old Negro boy with sickle cell trait who wants to be an athlete?

Dr. Scott: You tell him to be an athlete. The patient however worries about it a great deal. He reads the newspaper and hears about people dropping dead on the basketball court. Statistically, there is no lessened survival of sickle trait carriers compared to the rest of the population. There are rare instances of morbidity that are real, but they are very rare. There are a lot of professional athletes who have sickle trait who do not get sick, and a study has shown that professional football players do not have any increased morbidity because they play football and have sickle trait. Tell them to consider themselves healthy. You do warn them about high altitude flying and tell them to tell the surgeon that they have sickle trait if they need surgery so that under anesthesia they get plenty of oxygen. Those are minor things.

Dr. John L. Patterson: If you are worried about Sickledex tube clouding, can you quick check the material in that tube with a microscope?

Dr. Scott: If you are going to do anything microscopically after doing the test tube test, I would do a sickle prep and check it out. It does take longer but you can be certain then.

Dr. Joel Goozh: What advice do you give on childbearing to couples risking children with sickle cell anemia?

Dr. Scott: We do not make recommendations about family size to anyone. I do not think that is appropriate. We have a responsibility to young people to inform them of available medical information that can be useful in planning their futures, their families. If we find a couple that has two trait carriers, we

give them the different options they can take. How many children, or whether to have children is up to them.

Dr. George Vennart: I think it's fair to say, largely due to your urging, that people wonder whether to order a sickle cell prep when they get an abnormal electrophoresis. That is done automatically in this institution.

Dr. Scott: Yes. Presently if you get a report of sickle trait on your sample it is sickle trait because it has been checked out by Sickledex or sickle prep.

Dr. W. T. Dabney: Is the number of homozygous S patients you find consistent with that predicted from the 8% incidence of trait carriers?

Dr. Scott: The people we detect in the screening as homozygous S were from a population of healthy appearing people. People who have sickle cell anemia do not often come to be tested or do not take part in the screening program. So, we have very few homozygous S's. Most of them are people who have not been previously diagnosed, or someone in a group being screened who didn't want to single himself out by stepping out of the program.

Dr. Goozh: If there is sickling on the routine peripheral smear, what does it mean?

Dr. Scott: That is an interesting question. If you see sickling on the peripheral smear it is most certainly going to be sickle cell anemia, sickle thalassemia or the thal^0 variety or it is going to be S-O_{ARAB} disease. That makes it a very interesting observation.

Dr. Richard Kirkland: Do we really have to do both types of electrophoresis?

Dr. Scott: In any patient who has what appears to be one of the syndromes of disease, not merely sickle trait, not merely C trait, but on what looks like SC disease, SS disease, or something like that, you need to do the citrate agar electrophoresis. You can do that by giving us a sample, and we'll send it off for you and get the results back in ten days.

Dr. Patterson: Can you get citrate agar electrophoresis here?

Dr. Scott: It could be done here. We have not asked the Clinical Pathology people to do it for us because we have had the availability of the hemoglobin reference center at CDC. It would be nice if it were done here.

Dr. Richardson Grinnan: What are the complications of SC, SD disease?

Dr. Scott: The rank order of severity would be SS, S-thal^0, SO_{ARAB}, SC, SC, sickle-thal+. The complications are all similar, the differences are a matter of degree and frequency. With SC disease you get the same complications as with SS disease, but you get them less often. You have fewer crises, but you may have the same type of crisis. You have fewer complications but you may have every similar complication and some even more frequently like the eye findings in SC disease but usually a milder course. The same is true for SD where you have a mild hemolytic anemia but you may have sickling occasionally. In the sickle-thal there may be a very mild syndrome but you may get a sickling crisis.

Dr. Dabney: What effect does genetic counseling have on childbearing in these families.

Dr. Scott: For sickle cell anemia there are no data yet. We are trying to amass some in our long term study. We are following about 50 couples, pairs of trait carriers for S or C genes, and we will learn in a few years what influence this knowledge had on their childbearing plans.

Mental Health . . . .

Gilles de la Tourette Syndrome

WILLIAM J. CARROLL, M.D.

In 1885, Dr. Tourette of Saltpetriere in Paris described the syndrome which now bears his name as a nervous affliction characterized by motor incoordination accompanied by echolalia and coprolalia.[1]

It is characteristically first seen in childhood between the ages of six and ten years, more so in males than in females. The symptoms include numerous motor and later vocal ticks, usually accentuated by fatigue and emotional stress and ameliorated by rest or pleasurable activity. The vocal tick may resemble throat rasping or barking, developing into distinguishable words with time. Echolalia occurs less frequently, apparently for the purpose of controlling emerging thoughts of an unacceptable nature. Examples are "Shut up" and "Don't say it". Coprolalia occurs near puberty and is a pathognomonic sign.

The disease is characterized by periods of exacerbations and remissions which are not always predictable, although remissions are usually noted in periods of lessened stress.[2] There is usually a gradual amelioration during late adolescence and early adulthood, but the course of the disease in each case is in great part determined by environmental factors. Since the vocal ticks may indicate to an observer that the patient is talking to himself and is not lucid, a "crazy" label may be applied to him and subsequent teasing may occur. The psychological effects of the teasing on an adolescent may cause an accentuation or prolonging of the symptoms and further detriment to the patient. Neurological deterioration does not occur as was once believed, nor is the outcome a psychotic one, but merely the patient's defense against the social stigmas attached to the symptoms of the disease.

Theories concerning the etiology of the syndrome are legend. However, in considering the etiology of the disease, the symptoms of latah (another name for the syndrome) must be differentiated from cognate disorders such as hysterical ticks, chorea, and the catatonic movements of schizophrenia. Some consider the etiology to be psychogenic or hysterical,[3] but Mahler and Tangell believe it to be an organic disorder. In the light of the work of Balthaser,[4] this theory seems fairly accurate. Although the EEG is not abnormal with this condition and therefore cannot be used for diagnosis, the efficacy of butyrophenones in treatment promotes the organic theory, with the basal ganglia as the focus of the disturbance. Before the formulation of the organic theory, the disease was thought to follow a predictable and unchangeable downhill course ending in a dismal conclusion of total withdrawal and insanity. However, the advent of neuroleptic drugs, particularly the butyrophenones[5] or haloperidol, dramatically changed this dismal outlook and allowed many who suffered from this syndrome to eventually lead successful lives.

The theory also exists that psychological factors reacting on an organic substratum are responsible for these symptoms. Psychodynamically, the symptoms develop under conditions leading to repressed tension and psychoneurotic overflow into motor ticks. Involuntary or inarticulate vocal protests develop and gradually evolve into involuntary coprolalic ticks. In some cases, a conscious hostile maneuver to needle or to "get back at" a resented parent[6] or other authority figure causes these expres-

CARROLL, WILLIAM J., M.D., *Staff member of the Riverside Hospital Mental Health Center, Newport News.*

Approved for publication by the Commissioner, Department of Mental Health and Mental Retardation.

sions to then be used on a voluntary level. The progression is from the intrapunative to the extrapunative, and from the psychoneurotic-like to the psychopathic-like symptoms and behavior.

Ascher[7] believed that most of the symptoms could be understood in terms of the patient's relationship toward authority figures since all observed patients seemingly have difficulty with a domineering parent. He also felt that coprolalia was a dissociative phenomenon in which the hostile aggressive impulses toward the parents were diverted from the original objects toward the world in general. Others believe that these ticks were not only for the discharge of aggression, but also for erotic expression. Otto Fenichel[8] considered the muscular elements, or twitching, as nothing more than a masturbatory equivalent which lessened anxiety.

The following case report concerns a twelve year old Negro male, diagnosed as having Gilles de la Tourette Syndrome and treated for one year, nine months, with haloperidol.

The patient was seen in a mental health center in February, 1972, because of disruptive behavior in school. He was said to be rowdy and hyperactive. In addition, he frequently talked to himself in the classroom. The teacher reported that she could not conduct class because of the distractions he created and that he spent much time in the lavatories, where he could be heard muttering to himself in a profane manner.

This was the third time in three years that his case had been opened. His two previous admissions were for hyperactivity and anxiousness, successfully treated with minimal psychotherapy and phenothiazines. It was noted that his behavior problems characteristically erupted in the beginning of a school year, apparently due to having new teachers and the pressure of academic life following a holiday. The problems were usually aggravated by a demanding and punitive teacher. Treatment of the first episode was included solving his mother's marital problems and transferring him to a class with a more supportive teacher. On his second admission, it was noted that his stepfather was drinking heavily and that school was again too demanding. He was treated with thioridazine (twenty milligrams, three times a day) and trifluoperazine (two milligrams, two a day) and family therapy was utilized. This treatment, in addition to another adjustment in class atmosphere, alleviated the symptoms.

On the third admission, as well as the two previous admissions, his diagnosis was listed as "Over-Anxious Reaction of Childhood". When he was seen in the spring of 1972, he manifested the following symptoms: facial ticks, including grimacing; skipping and jerking of the legs; flaying of the arms; and jerking of the head. However, he appeared well coordinated in his normal walking, etc., showing no evidence of central nervous system disorder. He was also observed to exhibit echolalia, barking, and grunting noises. Although there was no history of coprolalia, or cursing, and he denied swearing, he swore during the interview. A neurological examination in the hospital revealed that he did indeed have Gilles de la Tourette Syndrome, which explained the motor ticks and swearing that he apparently could not control.

The psychological testing done in the hospital reveal the patient to be of borderline intelligence and also revealed some insignificant organicity. His EEG was normal. His early academic history was general, with no significant failures. His family history revealed no motor ticks, insanity, or chorea, but his natural father had died of drowning and the boy was concerned about his mother's poor health and the possibility that she might also die.

The motor ticks were lessened during play and after rest, absent with sleep, and accentuated when anxious. For example, while shooting pool, he exhibited no ticks, but while waiting for the other player, he exhibited skipping and involuntary motor jerks. A dose of haloperidol (two milligrams, twice a day) dramatically stopped his coprolalia and echolalia and significantly controlled the motor involvement. His response to this initial dose contin-

ued for three or four months, but gradually decreased with the onset of autumn and school.

At that time, the dose was increased. It was again increased in late October when it was noted that, in addition to the ticks, his tongue was protruding and he had developed a severe torticollis to the left. Despite the increase of the dosage of haloperidol to fifty milligrams per day, shrugging of the shoulders and flaying of the arms were noted in middle November as well as skipping and cursing. It became apparent that haloperidol was no longer able to control the problem.

An article[9] appeared concerning refractoriness with haloperidol; for which reason it was discontinued and chlorpromazine was tried. It was planned that after six to eight weeks, haloperidol could again be used effectively. However, in late November, the ticks became so severe that he could not control a pool cue at all, and had to be admitted to the hospital. Haloperidol was reinstituted after only six weeks, and again a high dosage had to be reached before his condition was stable enough for him to be able to return home.

Afterwards, when he was seen in the outpatient clinic, it was noted that the torticollis was more persistent than ever although the coprolalia and motor ticks had been reduced significantly. A home-bound teacher was arranged for the remainder of the school year. Muscular relaxation and negative practice relaxation exercises were prescribed and were effective for two to three weeks, after which his enthusiasm waned and the symptoms returned to their previous strength.[10]

During the spring and summer months, his relationship with his therapist developed since the therapist showed a personal interest in his case, taking long walks with him and attempting to create a friendship. As his attachment grew, his dosage could be gradually reduced and his final dosage was ten milligrams daily. Even the torticollis was less noticeable in addition to the virtual cessation of all other ticks.

In the fall, his ticks did not flare up as usual with enrollment in regular school, but continued to decrease. At the present time, they are in the most controlled state ever observed.

Although there is no indication that his present condition will continue ad infinitum and there is no way except with time to tell whether it represents a cure or a remission, there is no doubt that excellent cooperation by the school system and a close clinic follow up were significant in bringing about this condition.

CONCLUSIONS

Gilles de la Tourette Syndrome is probably organically based, with psychological factors playing a significant role in the exacerbations and remissions.

Halperidol appears to be effective in the treatment of this illness.

Treatment is multifaceted and therapeutic alliance is beneficial.

Behavior modification and thorazine are not always successful, but are worthy of a trial.

Whenever a child near puberty disrupts the school setting with hyperactivity and irrational misbehavior and is therefore expelled or ordered to see a physician, Gilles de la Tourette Syndrome must be considered.

References

1. Gilles de la Tourette: Archi de Neurology 9:19, pages 159, 1885.
2. A. R. Lucas: New York State J. M. September, 1970.
3. G. Gunion: "Tic Convulsif as Hysterie", *Revue de Medicine*, Volume 7 (1887), page 509.
4. K. Balthaser: Arch. Psychiat. Volume 195, page 531, Germany (1957).
5. Arthur K. Shapiro: New York State J. M. pages 2210-2214, September, 1970.
6. A. R. Lucas: Int. J. Neuropsychiat. 1967.
7. E. Ascher: "Psychodynamic Considerations or Gilles de la Tourette's Disease", Am. J. Psychiat. Volume 105, pages 267-276 (1948).
8. Otto Fenichel: The Psychoanalytic Theory of Neurosis, New York, Norton 1945.
9. Digiacomo, J. N.: J. Nerv. Mental Dis. Vol. 152 (2); pages 115-117, February 1971.
10. V. Savicki and A. Carlin: 1972, Int. J. Child Psychotherapy, Volume 1, Number 3, 1972.

Medicare—Part B . . . .

CURTIS J. KELLY, JD

Physicians' Services to Immediate Relatives

Medicare Part B is prohibited from reimbursing charges for services rendered to immediate relatives. The term "immediate relatives" is defined to include: (1) husband and wife; (2) natural parent, child and sibling; (3) adopted child and adoptive parent; (4) step-parent, step-child, step-brother and step-sister; (5) father-in-law, mother-in-law, son-in-law, daughter-in-law; (6) grandparent and grandchild.

The intent of this exclusion is to bar Medicare payment for personal services which would ordinarily be furnished gratuitously because of the relationship of the beneficiary to the person imposing the charge.

Payment *may be made*, however, for charges imposed to recover out-of-pocket expenses, incurred in furnishing covered items or supplies such as drugs and biologicals, prosthetic devices, etc. In such cases, the charge may not exceed the actual out-of-pocket costs.

Charges imposed by a medical group, clinic or supplier which is not a corporation are, in effect, imposed by the owner or owners of the business. This exclusion applies where such a firm is owned by a sole proprietor who bears one of the excluded relationships. Since a corporation is a separate legal entity, the charges it imposes would *not* be subject to this exclusion regardless of the relationship of the patient to the corporation's owner or owners.

Coverage Items

1. Coverage has been extended to rechargeable battery powered pacemakers and nuclear powered units in addition to the conventional zinc-mercuric oxide battery type. The new coverage of the nuclear pacemaker is limited to those produced under licenses issued by the Atomic Energy Commission.
2. *Breast prostheses* (including a surgical brassiere) are now *covered* for postmastectomy patients.
3. Medicare payment may be made for the *hydrophilic soft contact lens, Softcon, (Vifilcon A) corneal bandage lens*, produced by Warner Lambert Company, when used as a moist bandage in treatment of bullous keratopathy. Coverage is limited to those cases where the lens is applied and removed by the physicians billing for the lens.
4. *Artificial lenses (pseudophakoi) implanted* in aphakic patients are covered, with certain limitations. All presently used iris fixation lenses, irido-capsular fixations lenses and capsular fixation lenses are covered. However, the *CHOYCE* lens is the only covered anterior chamber angle fixation lens. Where a non-covered pseudophakos is implanted, no payment may be made for the lens or any services furnished in connection with its implantation.
5. *Withdrawal treatments for narcotic addiction* are reimbursable under Medicare, Part B, when provided by the physician directly or under his personal supervision. Self-administerable drugs used in connection with this treatment are not covered.
6. *Esophageal speech training* is covered when given by a physician or by his employees under his direct supervision. Esophageal speech training is *not* covered when furnished by an independently practicing therapist.
7. *A Psychiatrist's consultation* with a beneficiary's family or associates would be considered a covered service if it can be shown that the purpose was to secure necessary background information, not available from the patient, to assist in diag-

nosis or treatment planning. A consultation directed toward other purposes, such as helping the family understand and accept the patient's condition, arrange for living quarters, etc., would *not* be reimbursable as part of the physician's personal services to the patient.

8. It is the determination of the Social Security Administration that the medical effectiveness of *prolotherapy, joint sclerotherapy and ligamentous injections* with sclerosing agents has not been established. Medicare reimbursement may not be made for these therapies.
9. Due to the lack of evidence of the effectiveness of *Vitamin* B_{12} administered for the purpose of strengthening weakened tendons, ligaments, etc. of the foot, such services are not covered under Medicare.
10. *Plastic surgery* to correct "moon face", which may develop as a side effect of cortisone therapy, is considered to be cosmetic surgery and therefore excluded from Medicare reimbursement.
11. *L-Dopa* is a self-administerable drug and *not* covered under Medicare. However, a physician's services rendered in connection with its administration and control of its side effects would be covered if determined to be reasonable and necessary. The *laboratory tests* medically warranted in connection with the administration of L-Dopa are also covered.

    Physical therapy for parkinsonism is covered to the point that the individual's restoration potential is achieved. Thereafter, the services required to maintain the patient at this level would not generally require professional skills. At this point, the role of the physician or qualified therapist would be to evaluate the patient's needs, design a program of exercise, etc. These evaluative services would be covered, however, services furnished in connection with the carrying out of the *maintenance program* established by the therapist would not be covered.
12. *Sterilization* is covered only where it is a necessary part of the treatment of an illness or injury, e.g., removal of a uterus because of tumor, removal of diseased ovaries, or bilateral orchidectomy in a case of cancer of the prostate. Sterilization which is performed for nontherapeutic purposes, e.g., vasectomy, is *not covered*.

U.S. Adds 9,845 Doctors

There were 9,845 more physicians in the United States at the end of 1973 than in the previous year, according to the American Medical Association's Center for Health Services Research and Development.

The final figure in the AMA master file of physicians at the end of the year was 366,379, compared with 356,534 at the end of 1972.

The number of physicians providing patient care rose from 292,210 in 1972 to 295,257 last year. Those listing their major activity as medical teaching rose from 5,636 in 1972 to 6,183 last year; the number in research dropped from 9,290 to 8,332.

The number of general practitioners decreased from 55,348 in 1972 to 53,946 last year. Physicians in medical specialties rose to 86,924 last year from 84,153 a year earlier; those in surgical specialties rose to 91,549 from 91,058.

Woman's Auxiliary . . . .

The Memorial Fund

The Memorial Fund was established on October 14, 1968, when the auxiliary voted to combine the Leigh-Hodges-Wright Memorial Fund and the Alice H. Liggan Loan Fund.

Since then a total of $3,750.00 has been given in scholarships or loaned to students in the medical field. In most cases these students would not have been able to pursue a medical career had it not been for the financial aid at a crucial time for them.

The Memorial Fund is strictly a project of the Woman's Auxiliary to The Medical Society of Virginia. The students who apply must be recommended by an auxiliary member. The fund is supported solely by contributions from component auxiliaries and donations from auxilians as gifts or as memorials for deceased friends. The names of those to be memorialized are entered in the Memorial Book together with the dates of their birth and death.

This year fourteen auxiliaries have contributed $615.00. The five member committee that administers the fund urges all component auxiliaries to budget a contribution for the Memorial Fund annually, and to remind their members to contribute.

If you wish any further information concerning the Memorial Fund, please write to the chairman. If you wish to contribute, please make checks payable to "Va. Med. Aux.-Memorial Fund" and mail to the chairman. Only with full participation can we help the many students who apply.

Mrs. A. B. Gravatt, Jr., *Chairman*
"Sloop Landing", Box 112
Weems, Virginia 22576

Philanthropic Projects

Two projects which are under the Philanthropic Chairman for the State Auxiliary to The Medical Society of Virginia are to support the Sheltering Arms Hospital and Crippled Children's Hospital in Richmond. These are the only projects which are given united support through the Philanthropic Chairman.

Even though many Auxiliaries have these charities in their budget, a letter is sent each year to Auxiliaries and Members-At-Large to remind them when it is time to send their contributions.

Sheltering Arms is open to adults with a variety of medical needs. Both Sheltering Arms and Crippled Children's receive and treat patients from the entire State of Virginia regardless of financial status. It is for this reason the State Auxiliary Board continues to feel the need to support these worthy institutions.

Mrs. James R. Brunk, *Chairman*

Editorial....

The Fairfax Hospital Issue

THIS ISSUE of the Virginia Medical Monthly consists principally of articles prepared by members of the staff of the Fairfax Hospital. This is the sixth special issue of the journal published during the past six years by faculty members of medical schools in Virginia, or by the staff of various general hospitals, or, in the case of Lynchburg, by physicians who practiced within a geographical area. The Editorial Board has found that one special issue each year works out very well, for it enables the physicians in Virginia to become familiar with the excellent medicine practiced in various parts of the Commonwealth.

As is often the case, a little of anything may be good but too much of almost anything may become a problem and this has proved to be the case whenever two special issues have appeared within a period of twelve months. The publication of articles submitted by physicians who have not participated in the special issues is often delayed with understandable uneasiness on the part of the authors and at times actual hardships have resulted—especially with regard to establishing priorities.

The Fairfax issue is the first collection of articles published in the journal by a northern Virginia hospital. This excellent hospital, which is located in Falls Church, has always fascinated the Editor by reason of its address—3300 Gallows Road. It is to the credit of the founders of the institution that they did not substitute some wishy-washy commonplace name for the robust, easy to remember designation it carries so proudly. Richmond lost much when it changed time honored "Scuffle-town Road" to its present prettified "Park Avenue".

The preparation of a special issue for the Virginia Medical Monthly is not an easy task. Each special edition requires a dedicated member of an institution who either by perspicacity, cajolery and flattery or by appealing to the better selves of his fellow staff members manages to extract a sufficient number of articles that will show the hospital in the best possible light, without alienating those of his friends who were not urged to participate in the venture or whose articles were not accepted. Just such a person must have been Dr. C. Barrie Cook, for all of the Fairfax Hospital copy was received in the Virginia Medical Monthly office ahead of schedule and not a single illustration was missing.

Dr. Cook, who is a native Virginian and was a premedical student at Hampden-Sydney College, traveled north of the Potomac for most of his medical education and hospital training as well as subsequent teaching in northern medical centers. Perhaps the tempo he found in cooler climes has stood him in good stead for during the past decade he has served as Chairman of the Department of Pathology and his additional activities in Nuclear Medicine at the Fairfax Hospital as well as a teaching schedule in the George Washington University Medical School.

He has been a bank director, a member of the vestry of Truro Episcopal Church, a leader in a Boy Scout troop, an officer in the American Association of Blood Banks, a member of a Regional Park Authority and active in various Health Planning Councils—all in addition to his current medical activities in Falls Church. Dr. Cook exemplifies the old dictum that it requires a busy man to do a good job. He has also assembled an excellent collection of articles from the Fairfax Hospital staff and the Virginia Medical Monthly is pleased to publish them.

H.J.W.

LET'S REMINISCE!

Cooking by Electricity.

A curious experiment (says the Courier de Paris) took place on Monday at St. Denis, at the residence of M. Gisquet, formerly prefect of police at the commencement of the reign of Louis Philippe, and now oil refiner. By means of an apparatus invented by M. Bullot, and in which electricity is the only agent, six pounds of beef were perfectly cooked in five minutes and ten seconds. Several trustworthy witnesses, watch in hand, verified this rapid act of cookery. At the end of the 310 seconds the boiled meat and the broth made from it were tasted, and both were found to be excellent, although a little too salty—a fault, however, not attributable to the apparatus.

(The Virginia Medical Journal, Vol. IX, No. III, September 1857)

News . . . .

Calendar of Events

Annual Congress on Occupational Health—Sponsored by AMA—Marriott Motor Hotel—Chicago—September 9-10, 1974.

Walter L. Thomas Symposium on Gynecologic Malignancy and Surgery—Duke University Medical Center—Durham, North Carolina—September 20-21, 1974.

Virginia Thoracic Society—Annual Meeting—Holiday Inn/Scope—Norfolk—September 27, 1974.

Cardiac Arrhythmias—Electrophysiological Concepts—Sponsored by Virginia Heart Institute—Blue Cross-Blue Shield Building—Richmond—September 27, 1974.

Virginia Gastroenterology Society—Annual Meeting—The Mariner—Virginia Beach—September 28-29, 1974.

AMA National Conference of State Medical Association Representatives on Continuing Medical Education—Drake Hotel—Chicago—October 2-3, 1974.

The Medical Society of Virginia—Annual Meeting—Williamsburg—November 3-6, 1974.

American Association for Clinical Immunology and Allergy—Annual Meeting—Pier 66—Ft. Lauderdale, Florida—November 21-24, 1974.

AMA Clinical Meeting—Portland, Oregon—November 30-December 4, 1974.

Air Pollution Medical Research Conference—Sponsored by AMA—Sheraton Palace Hotel—San Francisco—December 5-6, 1974.

Problems of Cortical Function—Sponsored by Division of Pediatric Neurology of the University of Virginia, Medical College of Virginia and King's Daughters' Hospital—Cascades Convention Center—Williamsburg—December 6-8, 1974.

* * * * * * * *

The Medical Society of Virginia maintains a registry of medical meetings and programs of interest to Virginia physicians. You can help by keeping us advised of any meetings scheduled in your area. This will not only help others avoid conflicts but also provide helpful information on opportunities for continuing education.

New Members.

The following members were received into The Medical Society of Virginia during the month of May:

Stephen Robert Baker, M.D., Great Falls
Carl Hill Bivens, M.D., Roanoke
Leon Ponder Bloodworth, M.D., Newport News
William Henry Brewer, M.D., Blacksburg
Vincent Paul Calabrese, M.D., Richmond
Russell Neff Carrier, M.D., Middleburg
Caroloyn Ray Cort, M.D., Richmond

Leo Aranas Escobedo, M.D., Newport News
Joseph F. Flis, M.D., Fairfax
Lorne Keith Garrettson, M.D., Richmond
Andrea Hastillo, M.D., Richmond
Daniel Pflum Hoback, M.D., Roanoke
Ernesto Ibanez, M.D., Amelia
Mervyn Robert King, M.D., Fieldale
Hermes Apostolou Kontos, M.D., Richmond
L. B. McDaniels, M.D., Yorktown
Bruce William Pfeffer, M.D., Springfield
Alan M. Podosek, M.D., Lynchburg
Anita B. Rafii, M.D., Richmond
Bonnie L. Reshefsky, M.D., Charlottesville
Jean Florence W. Rooney, M.D., Richmond
Samir Wahba Soliman, M.D., Williamsburg
Carl Lester Unsicker, M.D., Portsmouth
Dennis Watkins Wise, M.D., Winchester

Hampton Medical Society.

Dr. Howard A. Farrar is president of this Society with Dr. Frank C. Robert vice-president and Dr. B. H. Inloes, Jr., secretary. All officers are from Hampton.

Lynchburg Academy of Medicine.

Officers of the Academy for 1974-5 are: President, Dr. Parker H. Lee; president-elect, Dr. Carroll H. Lippard; and secretary-treasurer, Dr. Paul F. Fitzgerald. They will be installed at the September meeting.

State Board of Medicine.

Governor Mills E. Godwin, Jr., has appointed two physicians to the Board of Medicine for five year terms ending June 1979. They are Dr. James W. Walker, Charlottesville, and Dr. Edwin T. McNamee, Jr., Stuart.

Virginia Thoracic Society.

The annual scientific meeting of this Society will be held at Holiday Inn Scope, Norfolk, September 27th. Dr. William B. Hunt, Charlottesville, is president. The following program will be presented: Diagnosis of Environmental Lung Disease by Dr. Edward A. Gaensler, Boston; Shock Lung by Dr. James Scutero, Norfolk; Pleural Complications from Asbestos Exposure by Dr. Gaensler; Natural History of Chronic Obstructive Lung Disease by Dr. Benjamin Burrows, Tucson, Ariz.; Non-Respirator Treatment of Acute Respiratory Failure by Dr. Hall Canter, Washington; Selection of Antibiotics for the Treatment of Pulmonary Bacterial Infection by Dr. W. P. Edmonson, Jr., Norfolk; and panel discussions by the above participants and Dr. Frank A. Fusco, Washington; Dr. Thomas Hunnicutt, Newport News; Dr. Orhan Muren, Richmond; Dr. Edward S. Ray, Richmond, and Dr. Pierre P. Tulou, Norfolk.

Further information may be obtained from the executive secretary, Mr. Taylor R. Copping, P. O. Box 7065, Richmond, Virginia 23221.

American Association of Medical Assistants, Virginia Society.

The 18th annual convention of the Virginia Society of the American Association of Medical Assistants was held at the Ramada Inn, Virginia Beach, May 17-19. The program was hosted by the Virginia Beach Chapter and revolved around the theme, "And the Beat Goes On". "Pacemakers" were discussed by John P. Clarke, M.D., a general, vascular and thoracic surgeon; "The Emergency Coronary Care Program" was outlined by James P. Charlton, M.D., a general practitioner. "Heart Transplantation—Fact and Fancy" was discussed by Benjamin L. Aaron, M.D., a fellow in cardiovascular surgery at the Medical College of Virginia. "Project Hope" was discussed by Lawrence Smith, M.D., a pathologist at the General Hospital of Virginia Beach.

The following officers were elected: Dorothy Sellars, President, Richmond; Myrtle Ingvaldsen, President-Elect, Virginia Beach; Macel Wisecarver, Vice-President, Virginia Beach; Brenda Spigler, Secretary, Richmond; and Virginia Keeter, Treasurer, Norfolk.

One hundred-eighty-five members of the Virginia Society were registered for the con-

vention, and 310 members and guests were served for the banquet.

The CMA mini test was given on the last day to interested medical assistants. This simulated examination is about 1/5 the length of the actual certification examination. It was developed to answer some of the questions about the certification examination and to encourage more medical assistants to take the latter. It is hoped that in the future more medical assistants in Virginia will become certified.

Lawrence D. Young, M.D., of Newport News, was appointed as an advisor for the State association for a three-year term.

Pathologist

Wanted for busy general hospital. Modern laboratory. Salaried position. Excellent location near beach resorts. Within a 100-mile radius of Philadelphia, Baltimore, and Washington. A beautiful area in which to work and live. Reply to Mr. Kenneth W. Kern, II, Kent General Hospital, Inc., 640 South State Street, Dover, Delaware 19901. (*Adv.*)

Family Physician Wanted.

The Roanoke Memorial Hospital Family Practice Residency Training Program has an opening for another full-time physician. The residency fills regularly its program and has six full-time directors of other programs who participate and is affiliated with the University of Virginia. Practice experience preferred. Faculty rank, income, benefits, etc., competitive. Contact Dr. Charles L. Crockett, Jr., Roanoke Memorial Hospitals, Belleview at Jefferson Street, Roanoke, Virginia, 24009. Phone: 703-981-7228. (*Adv.*)

College Physician Wanted.

The College of William and Mary in Williamsburg needs a third M.D., preferably a G.P. or Internist, for an active Student Health Service caring for 5,000 students, September 1, 1974. New 18-bed facility opened in August of 1973. Good fringe benefits (State of Virginia Employee Plan). Competitive salary. Contact R. D. Cilley, M.D., Director, Student Health Service, College of William and Mary, Williamsburg, Virginia 23185. Phone 804-229-2793. An Equal Opportunity Employer. (*Adv.*)

Emergency Physician Wanted.

To join well established four-man association in Richmond. Modern suburban hospital. Excellent back-up by all specialties. Average 44 hour week. Guarantee first year, then full partnership. Department status. Prefer M.D. who wants to make emergency medicine a career. Reply to Box 25, care the Virginia Medical Monthly, 4205 Dover Road, Richmond, Virginia 23221. (*Adv.*)

Staff Physician.

One Admitting Physician for night tour; One physician to work in the Ambulatory Care Service of a large active GM&S hospital, affiliated with the University of Virginia Medical School. Hospital adjoins the city of Roanoke on a 266-acre site in the beautiful Roanoke Valley between the Allegheny and Blue Ridge Mountains, with a valley population of approximately 250,000. Requires permanent visa or U.S. citizenship. Salary dependent upon qualifications. Contact Chief of Staff, VA Hospital, Salem, Virginia 24153. Equal Opportunity Employer. Telephone 703-344-2021, Extension 252. (*Adv.*)

Obituary . . .

Dr. Holcombe Harris Hurt,

Lynchburg, died July 1, at the age of seventy-three. He received his medical degree from the University of Virginia in 1924 and practiced in South Boston from 1926 to 1930. In 1932 Dr. Hurt began his surgical practice in Lynchburg. He served in the medical corps of the Army from 1940 to 1945 and attained the rank of colonel. Dr. Hurt was a former chief of staff at Lynchburg General Hospital and president of the medical staff at Virginia Baptist Hospital. He had been a member of The Medical Society of Virginia since 1928 and served as second vice-president in 1957.

His wife, two sons and a daughter survive him.

Dr. Joseph Forrest Phillips,

Chase City, died April 19. He was seventy years of age and graduated from the Medical College of Virginia in 1933. Dr. Phillips had been a member of The Medical Society of Virginia for thirty-nine years.

His wife survives him.

Dr. Samuel Gilmore Saunders,

Burkeville, died June 27, at the age of sixty-nine. He was a graduate of the Medical College of Virginia in 1933. Dr. Saunders practiced in Waynesboro from 1940 to 1970 when he joined the staff of the Piedmont State Hospital in Burkeville. He retired in 1973 and moved to Lynchburg. Dr. Saunders was a past president of the Waynesboro Community Hospital and a past master of Masonic Lodge No. 209 in Waynesboro. He had been a member of The Medical Society of Virginia since 1944.

His wife, a daughter and two sons survive him.

Dr. Davis

Dr. John Wyatt Davis, Jr., son of a distinguished Lynchburg physician, was born in Rustburg, September 9, 1905. He received his formal education in the Lynchburg Public Schools, the University of Richmond, and the Medical College of Virginia. After his graduation from the Medical College of Virginia in 1930, he practiced with his father until the latter's death in 1941 and continued in solo practice until his own death May 8, 1974.

Until his first attack of myocardial infarction in 1969, Dr. Davis worked full and overtime serving his many patients and also doing more than his share as a community citizen and also rendered great service to the cause of organized medicine. After his first myocardial infarct he still did much more work than the average man. He was a founder of the Lynchburg Life Saving Crew and for many years its only physician member. This alone puts him in a class by himself.

He served as Medical Examiner for the Commonwealth of Virginia for many years. He was an officer and former president of the Tri-State Medical Society, the Virginia Chapter of the American Society of Family Practice, delegate to the House of Delegates of The Medical Society of Virginia and other offices. All these were working as well as honorary positions.

He exhibited skill in his work as a physician and kindness and understanding of the true physician.

It is our privilege to be able to memoralize someone who gave of himself in so many ways and one who we were proud to have been among us.

The Lynchburg Academy of Medicine regrets deeply his death and requests that this resolution be sent to the Virginia Medical Monthly and a copy be sent to his sister.

Kenneth Cooper, M.D.
Harold L. Riley, Jr., M.D.
George B. Craddock, Jr., M.D., *Chairman*

ST. LUKE'S HOSPITAL

Established 1882
Hunter H. McGuire, M.D.

McGUIRE CLINIC, Inc.

Established 1923
Stuart McGuire, M.D.

1000 West Grace Street
Richmond, Virginia

General Surgery & Gynecology
Joseph W. Coxe, III, M.D.
H. Fairfax Conquest, M.D.
Gilbert H. Bryson, M.D.
William M. Crouch, M.D.

Anesthesiology
Beverley Jones, M.D.

Physical Therapy
Elizabeth L. Watson, R.P.T.

Internal Medicine
John P. Lynch, M.D.
John B. Catlett, M.D.
Robert W. Bedinger, M.D.
David L. Litchfield, M.D.
Burness F. Ansell, Jr., M.D.
W. Wayne Key, Jr., M.D.
Randolph M. Halloran, M.D.
Hilton R. Almond, M.D.
James A. Repass, M.D.

Radiology
Henry S. Spencer, M.D.
Donald P. King, M.D.

Isotopes
David L. Litchfield, M.D.

Pathology
Hubert R. White, Jr., M.D.

Hospital Administrator
Gerald J. LaGesse

Director of Nurses—St. Luke's Hospital
Ann M. Urbine, R.N.

School of Nursing
Ann M. Urbine, R.N., Director
Joan B. Hovis, R.N., Dir. of Ed.
Elizabeth H. Ellett, R.N., Instructor

Clinic Manager
S. Taylor Ware, Jr.

Director of Nurses—McGuire Clinic, Inc.
Mary E. Simmons, R.N.

TUCKER HOSPITAL Inc.

212 West Franklin Street

Richmond, Virginia

A private hospital for diagnosis and treatment of psychiatric and neurological disorders. Hospital and out-patient services.

James Asa Shield, M.D.
George S. Fultz, Jr., M.D.
Catherine T. Ray, M.D.

Weir M. Tucker, M.D.
James Asa Shield, Jr., M.D.

Tidewater Psychiatric Institute

1701 Will-O-Wisp Drive
Virginia Beach, Virginia 23454

and

1005 Hampton Boulevard
Norfolk, Virginia 23507

Private hospitals for the treatment of psychiatric disorders of adults and adolescents, alcoholism, and drug addiction. Residential special education for emotionally disturbed adolescents.

David C. Butler
Administrator

Julian W. Selig, Jr., M.D.
Hospital Director, Norfolk

Stuart Ashman, M.D.
Hospital Director, Virginia Beach

(Brochure sent on request)

Fourth Decade of Nursing

Accredited by the Joint Commission on Accreditation and Certified for Medicare

MRS. PLYLER'S NURSING HOME

KATE E. PLYLER (1876-1947)

GENE CLARK REGIRER (1912-1962)

A private nursing home dedicated to extended, intermediate and custodial care

1615 Grove Avenue, Richmond, Virginia, Telephone 353-3981

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Pulaski

Home For Adults

★ Newly remodeled and decorated
★ Private & semi-private rooms
★ Assistant on duty 24 hours a day
★ Medical facilities near by
★ Reasonable rates, $250 & up.

Write or phone for further information: P.O. Box 938, Pulaski, Va. 24301 or phone 980-2200.

Russ Penner,
Business Manager

ANNOUNCING THE OPENING OF

THE WADDELL CENTER

for Alcohol and Related Problems

112 Painter Street 703 236-2994
GALAX, VIRGINIA 24333

Walter K. Helton, M.Div., Director

- Twenty-Eight day residential program
- Services for men & women
- Detoxification available
- Telephone consultation encouraged
- Quiet neighborhood on the rim of the Blue Ridge

The Medical Society of Virginia

ANNUAL MEETING

Williamsburg

November 3-6, 1974

SAINT ALBANS

PSYCHIATRIC HOSPITAL

Radford, Virginia

STAFF:

William D. Keck, M.D.
Morgan E. Scott, M.D.
David S. Sprague, M.D.
Delano W. Bolter, M.D.
Edward E. Cale, M.D.
Terkild Vinding, M.D.
James P. King, M.D. (Emeritus)

Clinical Psychology:

Thomas C. Camp, Ph.D.
Carl McGraw, Ph.D.
Allen S. Rowe, Ph.D.

George K. White
Administrator
Richard A. Kennedy, Jr.
Asst. Administrator

BAYBERRY PSYCHIATRIC HOSPITAL

HAMPTON, VIRGINIA

Bayberry is a 125 bed private hospital which offers a wide range of inpatient, day care, outpatient, and consultative services, as well as treatment programs for adolescents, children, and alcoholics.

TREATMENT

After a comprehensive medical and psychiatric evaluation, each patient receives an individualized treatment program and schedule of activity therapies. Treatment may include individual therapy, group therapy, psychodrama, chemotherapy, electroconvulsive or insulin treatment.

EDUCATION

A regular school curriculum is followed and academic credit is given. The Hampton Roads Reading Center is located within the hospital and provides special instruction for children with dyslexia and other learning problems.

REHABILITATION

Rehabilitation services include individual counseling, special education, and job training programs.

ACCREDITATION

Accredited by the Joint Commission on Accreditation of Hospitals, approved for Medicare, member of the American Hospital Association, and licensed by the State Department of Hospitals and Mental Hygiene.

WENDELL J. PILE, M.D.
Medical Director

HOWARD L. COX, M.D.
BASIL E. ROEBUCK, M.D.
JONATHAN G. SOLOMON, M.D., LTD.

BROCHURE SENT ON REQUEST
Contact: Medical Director, 530 E. Queen Street, Hampton, Va. 23369
Telephone (804) 722-2504

STUART CIRCLE HOSPITAL

413-21 Stuart Circle RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.
Frank M. Blanton, M.D.
William W. Martin, Jr., M.D.
James R. Wickham, M.D.

Obstetrics and Gynecology:
Spotswood Robins, M.D.
David C. Forrest, M.D.
Joseph C. Parker, M.D.
William M. Oppenhimer, M.D.

Orthopedics:
Beverley B. Clary, M.D.
James B. Dalton, Jr., M.D.
Franklin P. Watkins, M.D.

Pediatrics:
Edward G. Davis, Jr., M.D.
Thomas P. Overton, M.D.
Albert S. Thompson, Jr., M.D.
Edward J. Wiley, M.D.

Roentgenology and Radiology:
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.
James W. Proffitt, M.D.

Anesthesiology:
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.
Armistead M. Williams, M.D.
James R. Darden, Jr., M.D.
Wyatt S. Beazley, III, M.D.

Urological Surgery:
Frank Pole, M.D.
Harry S. Rowland, Jr., M.D.

Plastic Surgery:
Hunter S. Jackson, M.D.

Ophthalmology, Otolaryngology:
Richard W. Dodd, M.D.
J. Warren Montague, M.D.

Pathology:
W. Scott Gilmer, Jr., M.D.

Physical Therapy:
William J. Cowan, R.P.T.

Director:
Charles C. Hough

Virginia is for lovers:
History lovers, sports lovers, antique lovers, garden lovers, food lovers, mountain lovers, beach lovers. Whatever it is you fancy, you can tickle your fancy here.

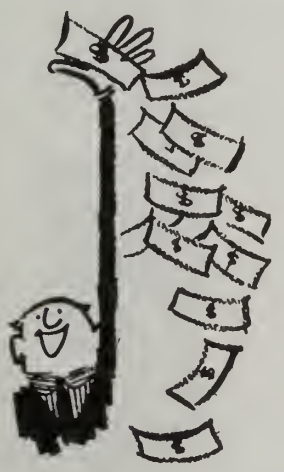
Visit, write or call Virginia State Travel Service, 9th & Grace Streets, Richmond 23219, phone (703)770-4484.

This advertising is published by Virginia Medical Monthly as a public service.

OVER $1,000,000 IN BENEFITS PAID TO THE MEDICAL SOCIETY OF VIRGINIA MEMBERS

Long-Term Disability Insurance At Low Group Rates

A Doctor's earned income can stop when he is **SICK** or **HURT** and **CAN'T WORK**. Long-term disability insurance could provide the needed **CASH** when this happens.



Here are a few of the outstanding features of this plan:

1. Lifetime accident benefits
2. Sickness benefits for up to seven years or to age 65
3. **UNIQUE** definition of disability (7 year benefit period if sickness prevents you from engaging in your specialty)
4. Confinement not required for disability benefits
5. Federal income tax-free benefits

ALSO

As a participant in this plan you receive:

1. Special low group rates
2. Convenient local claim service

Interested? To find out more, simply return the coupon below to the administrator nearest you.

THE PRICE OF A STAMP MAY ALSO BUY YOU PEACE OF MIND

Murphy Insurance & Travel
108 2nd St., S. E.
Charlottesville, Virginia 22901
295-4157

Ernest L. Baker Associates
Suite 1118
205 34th Street
Virginia Beach, Va. 23451
425-1892

Suter Associates, Inc.
2425 Wilson Blvd.
Arlington, Virginia 22201
525-6700

G. C. French Agency, Inc.
1004 North Thompson Street
Richmond, Virginia 23230
358-7141

General Insurance of Roanoke
Shenandoah Building
Roanoke, Virginia 24011
345-8148

I would like more information about the Long-term Group Disability Insurance sponsored by The Medical Society of Virginia.

Name ..... Phone .....

Address .....

City .....State ..... Zip.....

A resource for therapies, including a school for emotionally disturbed children

The Human Resource Institute of Norfolk offers individualized treatment programs within a therapeutic community to all ages and diagnostic categories of mentally and emotionally disturbed adults, adolescents, and children. By utilizing various individual and group therapies the patient becomes aware of his own feelings and his relationship to others. The diversified therapies increase the individual's self-esteem and encourage him to function in an effective manner.

An intensive program of community activities offered through the Creative Services Department promotes interpersonal relationships among patients and staff, and stimulates the patient's creative potential. Activities such as dance therapy, recreational therapy, occupational therapy, psychodrama, music therapy, and personal appearance therapy are individualized according to the patient's needs.

An integral part of treatment for the emotionally disturbed adolescent or child is the continuance of his education in a therapeutically controlled environment. HUMAN RESOURCE ACADEMY, a fully licensed and certified school, promotes learning with teachers specially trained in teaching the emotionally disturbed and learning disabled students.

Pharmaceutical therapy and close association with consultant physicians of all specialities are important aspects of patient care at Human Resource Institute.

To find out more about our comprehensive program contact the Co-Medical Directors, Dietrich W. Heyder, M.D., F.A.P.A., or Fathy A. Abdou, M.D., F.A.P.A., Human Resource Institute of Norfolk, Human Resources Building, 100 Kingsley Lane, Norfolk, Virginia 23505. Phone (804) 489-1072.

WE DIDN'T EARN SO MUCH TRUST BY CHANCE.

We know there are investments that can pay off with big returns. If you're ready to take big risks, as well.

Frankly, they're not for us.

At Virginia National's Trust Department, we take our name very seriously. We know many of our accounts represent a lifetime of work. So we seek prudent investments, reasonable returns—the kind that build an adequate pattern of growth for our clients.

And with that sensible approach, we've grown to be one of the largest and most experienced trust departments in Virginia.

But don't think words like prudent and sensible are synonyms for slow and stodgy.

We work hard finding the right investments and offer some amazing flexibility in designing plans.

So whether you're interested in personal estate analysis, living trusts, or investing funds for pension and profit-sharing, why not discuss it with us. No high-rolling promises. Just people you can be sure of.

VNB TRUST DEPARTMENT.

OFFICERS AND COUNCILORS OF THE MEDICAL SOCIETY OF VIRGINIA 1973-1974

President—John A. Martin, M.D., Roanoke *President-Elect*—William R. Hill, M.D., Richmond
Past-President—Carl E. Stark, M.D., Wytheville
Vice-Presidents—1st: Raymond S. Brown, M.D., Gloucester 2nd: James C. Respess, M.D., Charlottesville
3rd: James S. Kitterman, M.D., Norfolk

Executive Vice-President—Robert I. Howard, Richmond
State Commissioner of Health—Mack I. Shanholtz, M.D., Richmond
Editor, "Virginia Medical Monthly"—Harry J. Warthen, M.D., Richmond
Speaker of the House—William J. Hagood, Jr., M.D., Clover
Vice Speaker—K. K. Wallace, Jr., M.D., Virginia Beach

COUNCILORS	(District)	VICE-COUNCILORS
Harold L. Williams, M.D., Newport News	1st	Walter A. Eskridge, M.D., Parksley
Charles E. Davis, Jr., M.D., Norfolk	2nd	Gervas S. Taylor, Jr., M.D., Norfolk
Carrington Williams, Jr., M.D., Richmond	3rd	Charles M. Caravati, Jr., M.D., Richmond
George J. Carroll, M.D., Suffolk	4th	Gordon G. Birdsong, M.D., Franklin
Girard V. Thompson, Sr., M.D., Chatham	5th	Anthony J. Munoz, M.D., Farmville
H. C. Alexander, III, M.D., Roanoke	6th	Douglas E. Pierce, M.D., Roanoke
George M. Nipe, M.D., Harrisonburg	7th	Harry L. Westfall, Jr., M.D., *Fredericksburg*
Thomas L. Lucas, M.D., Alexandria	8th	Harry C. Kuykendall, M.D., Alexandria
James Hal Smith, M.D., Christiansburg	9th	Joseph H. Early, Jr., M.D., Hillsville
W. Leonard Weyl, M.D., Arlington	10th	C. Barrie Cook, M.D., Fairfax

DELEGATES AND ALTERNATES TO AMERICAN MEDICAL ASSOCIATION

Delegates—1973-1974
W. Callier Salley, M.D., Gloucester Point

1974-1975
William S. Hotchkiss, M.D., Norfolk
Michael A. Puzak, M.D., Arlington

Alternates—1973-1974
Percy Wootton, M.D., Richmond

1974-1975
F. Ashton Carmines, M.D., Newport News
Carl E. Stark, M.D., Wytheville

INDEX TO ADVERTISERS

Abbott Laboratories ---- 612
Bayberry Psychiatric Hospital ---- 687
Burroughs-Wellcome ---- 660
Commercial Insurance ---- 689
Dorsey Laboratories ---- 605, 607
DuPont ---- 614
Flint Laboratories ---- 657
Human Resources Institute of Norfolk ---- 690
Jefferson, A. G. ---- 614
Johnston-Willis Hospital ---- 686
Eli Lilly and Co. ---- 616
Loma Linda Foods ---- 657
Medical Society of Virginia, The ---- 686
W F. Merchant Pharmaceutical Co. ---- 614-615
Oriental Rugs ---- 613
People's Service Drug Stores ---- 606
Pharmaceutical Manufacturers Assn. ---- 610, 611
Plyler's Nursing Home, Mrs. ---- 685
Pulaski Home ---- 686
Retirement Plan ---- 604
Roche Laboratories ---- 2nd Cover, 601, 3rd and 4th Covers
Saint Alban's Psychiatric Hospital ---- 687
Searle ---- 659
St. Luke's Hospital ---- 684
Stanmar, Inc. ---- 608
Stuart Circle Hospital ---- 688
Tidewater Psychiatric Institute ---- 685
Tucker Hospital, Inc. ---- 684
Virginia National Bank ---- 691
Virginia Travel Service ---- 688
Waddell Center ---- 686
Wallace Pharmaceuticals ---- 608, 609
Williams Printing Company ---- 604

OFFICIAL PUBLICATION
OF THE
MEDICAL SOCIETY
OF VIRGINIA

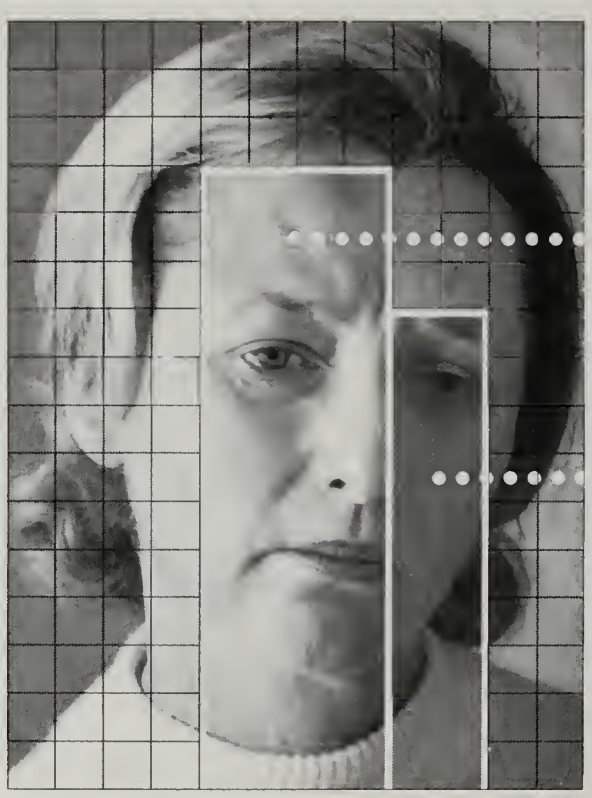
THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
OCT 9 1974

Virginia Medical Monthly

tember, 1974 Volume 101

PROGRAM ISSUE

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in f and/or severity of grand mal seiz require increased dosage of stan convulsant medication; abrupt w may be associated with temporar crease in frequency and/or seve seizures. Advise against simultar gestion of alcohol and other CNS sants. Withdrawal symptoms (sir those with barbiturates and alcol occurred following abrupt discor (convulsions, tremor, abdomina cle cramps, vomiting and sweati addiction-prone individuals unde

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

OCT 9 1974

respond to one

ccording to her major
oms, she is a psychoneu-
patient with severe
y. But according to the
ption she gives of her
gs, part of the problem
ound like depression.
because her problem,
gh primarily one of ex-
e anxiety, is often accom-
l by depressive symptom-
y. Valium (diazepam)
ovide relief for both—as
cessive anxiety is re-
the depressive symp-
ssociated with it are also
elieved.
here are other advan-
n using Valium for the
ement of psychoneu-
nxiety with secondary
sive symptoms: the
therapeutic effect of
n is pronounced and
This means that im-
ent is usually apparent
patient within a few
ther than in a week or
two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

nce because of their predisposi-
abituation and dependence. In
cy, lactation or women of child-
age, weigh potential benefit
possible hazard.

ons: If combined with other psy-
cs or anticonvulsants, consider
pharmacology of agents em-
drugs such as phenothiazines,
s, barbiturates, MAO inhibitors
r antidepressants may potentiate
n. Usual precautions indicated in
severely depressed, or with latent
on, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April, 1874)

PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF VIRGINIA

4205 DOVER ROAD, RICHMOND, VIRGINIA 23221

EDITORIAL BOARD

Harry J. Warthen, M.D.
Chairman and Editor

H. Lamont Pugh, M.D.

C. V. Cimmino, M.D.

John A. Owen, Jr., M.D.

Gordon W. Jones, M.D.

William H. Kaufman, M.D.

Robert Mitchell, Jr., M.D.

W. Leonard Weyl, M.D.

Fred J. Spencer, M.D.

Robert L. Cassidy, M.D.

E. Spencer Watkins
Managing Editor
4205 Dover Road
Richmond, Virginia 23221
Telephone 353-2721

Annual Subscription—$4.00
Single Copies—50¢

GUEST EDITORIAL
Enough—*Harry C. Kuykendall, M.D.* 715
ORIGINAL ARTICLES
The Doctor's Dilemma—*L. P. Lequesne, D.M., M.Ch., F.R.C.S.* 718
Newborn Transport in Virginia—*Peter W. Houck, M.D.* 721
MEDICAL GRAND ROUNDS
Nephrolithiasis 727
PUBLIC HEALTH
Nosocomial Infection Surveillance and Control in Virginia 740
MENTAL HEALTH
Prevention Maintenance for Mentally Ill Patients—*Greer Jackson, B.S.* 742
VIRGINIA REGIONAL MEDICAL PROGRAM
The Family Nurse Practitioner in Virginia—*Eugene Reyes Perez, M.D.* 750
MISCELLANEOUS
Virginia Professional Standards Review Foundation Chartered 756
THE MEDICAL SOCIETY OF VIRGINIA
Preliminary Program 761
Delegates 769
Committee Reports 772
WOMAN'S AUXILIARY
Program for Annual Meeting 800
MEDICARE—PART B 802
CORRESPONDENCE 803
EDITORIAL
Printing Costs and the State Medical Journals—*Harry J. Warthen, M.D.* 805
NEWS 807
OBITUARY 810

The Monthly is not responsible for the opinions and statements of its contributors.
All advertisements are accepted subject to the approval of the Editorial Board.
$4.00 of membership dues is payable for one year's subscription to The Virginia Medical Monthly.

Second Class Postage paid at Richmond, Virginia.

INDEX TO ADVERTISERS—826

THE GREATEST SINGLE THREAT TO YOUR FINANCIAL STABILITY IS

Disability

NOW YOU CAN INSURE AGAINST THAT THREAT

with Disability Income Program with New Maximum Benefits

Now for a very modest premium you can have up to $2,000 a month if you are disabled and unable to practice. Actually it's $2,200 with the 10% bonus now in effect. And it's all tax-free.

other features:

- Survivor's benefit at no increase in premium
- Coverage anywhere in the world, 24 hours a day, 365 days a year
- Special low-cost plan designed for the younger doctors
- Renewable to age 75 ■ Conversion privilege to age 65
- Few exclusions—even private flying is included
- Pays in addition to any other insurance you may carry

You can receive information immediately by writing or phoning (collect) the administrator. A minute of your time now will provide you and your family an income when it's needed most.

Program administered by:

David A. Dyer & Associates
Medical Arts Building
Roanoke, Virginia 24011
Call Collect: (703) 344-5000

FRED W. HALL
Northern Representative
8924 Orange Hunt Lane
Annandale, Virginia 22003
Call: 461-8087

FRED E. HAMLIN, JR.
Associate

DAVID A. DYER & ASSOCIATES has been awarded the seal of the American Institute of Professional Association Group Insurance Administrators. Membership in this group is by invitation only.

OTHER PLANS FOR YOUR PROTECTION

****Daily In-Hospital (up to $50)***
Major Hospital Nursing
$100,000 Excess Major Medical (Lifetime Renewable)*
****High Limit Accidental Death &**
Dismemberment ($250,000)
Professional Overhead Expense
****Guarantee Issue Life Insurance***
Special Income Protection*
Preferred Physicians Disability Income

Non-Cancellable and Guaranteed Renewable Disability Income

*Guarantee Issue **Available to Employees

These plans are IDEAL for INDIVIDUALS, PARTNERSHIPS and CORPORATIONS

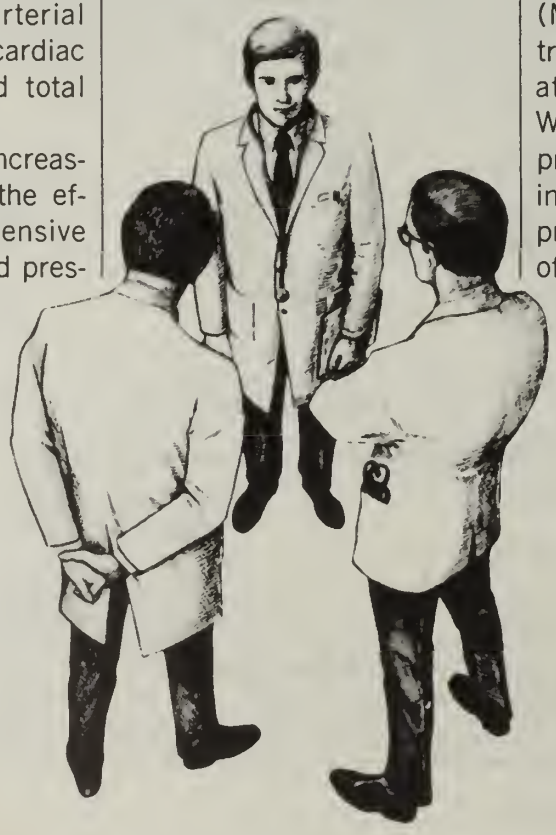
The more physicians consider the hemodynamics of lowering blood pressure...

Most physicians now agree on the importance of reducing blood pressure in the hypertensive patient. But high blood pressure exists, of course, only as part of a complete clinical picture. The hemodynamic profile of well-established essential hypertension is characterized by elevated arterial blood pressure, normal cardiac output, and increased total peripheral resistance.

And so, physicians are increasingly concerned with the effects of an antihypertensive agent not only on blood pressure itself but also on the hemodynamic pattern—in short, with the total effect of the drug. *Does* it indeed help lower blood pressure effectively? *Is* peripheral resistance reduced? *Are* cardiac output and renal functions maintained? And, also, is there likely to be drug-induced postural hypotension serious enough to pose a threat to the patient's cerebrovascular status?

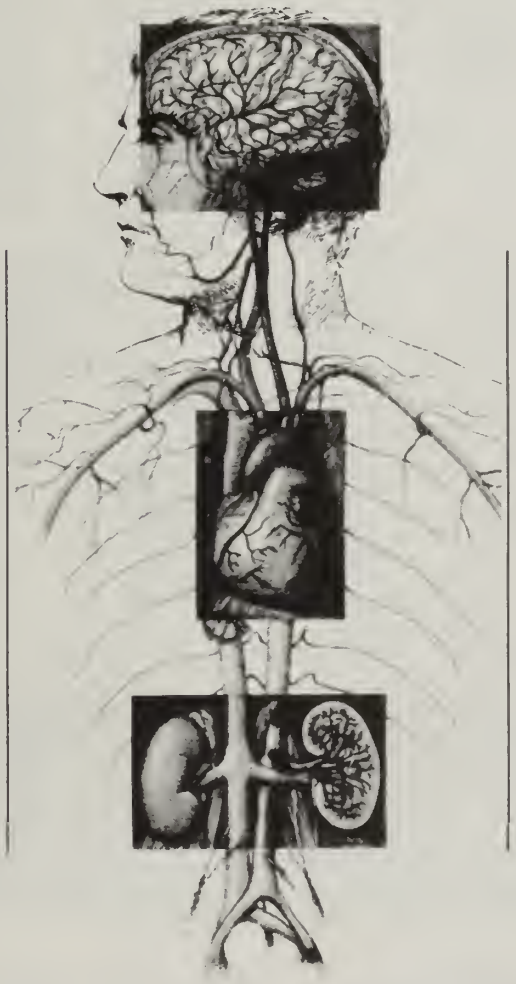
With this emphasis on overall drug performance has come a growing reliance on ALDOMET® (Methyldopa, MSD) in the treatment of sustained moderate hypertension.

With its unique hemodynamic profile, ALDOMET has drawn increasing attention and approval from physicians. First, of course, for its efficacy in



the more physicians rely on this unique antihypertensive

lowering blood pressure. But there are other considerations as well. Cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is actually slowed. Peripheral resistance is apparently reduced. ALDOMET does not usually compromise existing renal function; it generally does not reduce renal blood flow, glomerular filtration rate, or filtration fraction. And ALDOMET usually does not cause symptomatic postural or exercise hypotension.



Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

In most cases of sustained moderate hypertension

TABLETS, 250 mg and 500 mg

ALDOMET®

(METHYLDOPA | MSD)

smoothly lowers blood pressure

NEW now available in 500 mg TABLETS as well as the standard 250-mg tablets

For a brief summary of prescribing information, please see following page.

In most cases of sustained moderate hypertension

ALDOMET®
(METHYLDOPA MSD)

smoothly lowers blood pressure

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatus, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

addendum

MSD
MERCK SHARP DOHME

"Required Reading" For Your Hypertensive Patients

Because of the importance of patient motivation, Merck Sharp & Dohme offers "High Blood Pressure," a concise, pocket-sized booklet that defines the patient's own role in the management of hypertension. This booklet is available for you to give to your patients. It is designed to reinforce your explanation of hypertension and it emphasizes the importance of patient understanding in adhering to the regimen you prescribe.

Please ask your Merck Sharp & Dohme Professional Representative or write Professional Service Department, West Point, Pa. 19486 for a supply of this booklet.

When a cough spoils your patient's day...

Triaminic® Expectorant

Each teaspoonful (5 ml.) contains:

Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg.; pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.); glyceryl guaiacolate, 100 mg.; alcohol, 5%.

Available in 8-oz. Family Size and 4-oz.
No Rx needed—recommend over the phone.

The Adult Expectorant that is great for kids, too.

Dorsey Laboratories/Division of Sandoz-Wander, Inc./Lincoln, Nebraska 68501 BS-RD

YOU CAN SEE STANMAR HOMES in Alabama, Arkansas, Colorado, Conn., Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, N. Carolina, Ohio, Pennsylvania, Rhode Island, S. Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Canada, Puerto Rico and The Virgin Islands.

the custom home that doesn't cost more

Every Stanmar home is individualized to fit your needs, your site, and your budget.

If you are planning to build a primary residence or leisure home, send $2.00 for our full color brochure, "New Directions in Home Design".

stanmar inc

Box 0-46, Sudbury, MA 01776 (617) 443-9922

ATLANTA • BOSTON • NEW YORK

Rondomycin®

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, "Rondomycin" (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of "Rondomycin" (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: "Rondomycin" (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512

When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

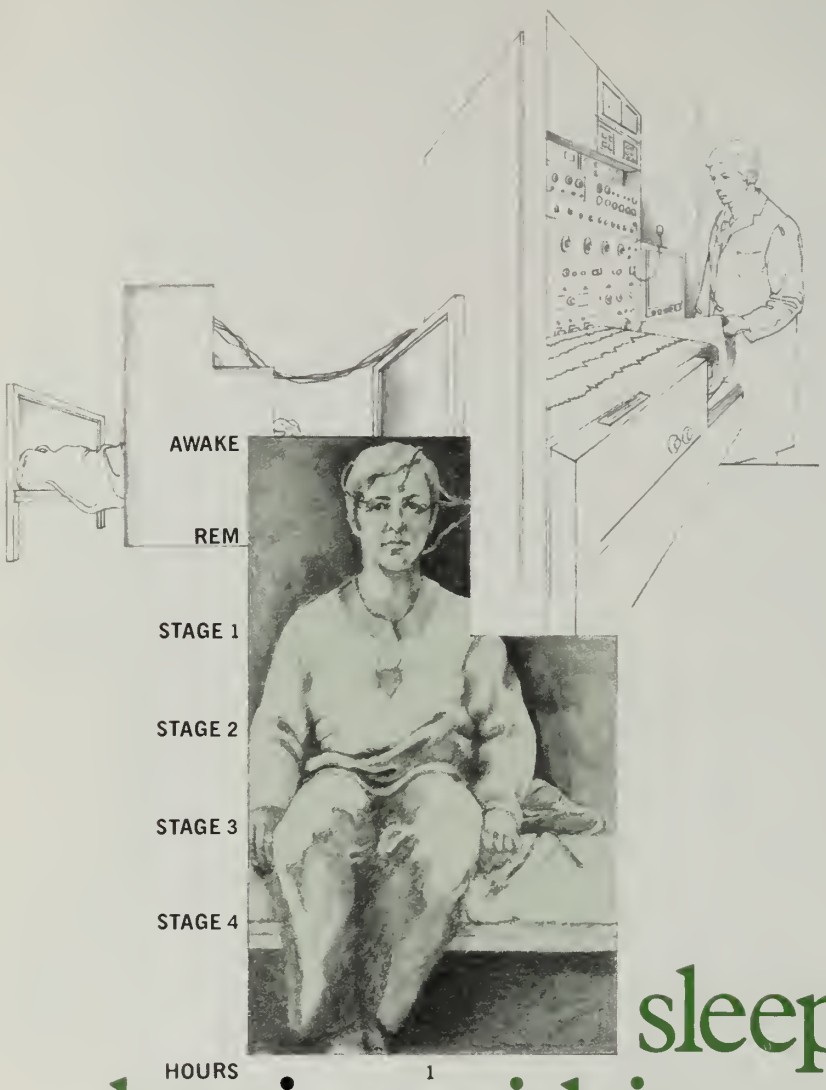
Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

udies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



sleep begins within 17 minutes, on average...

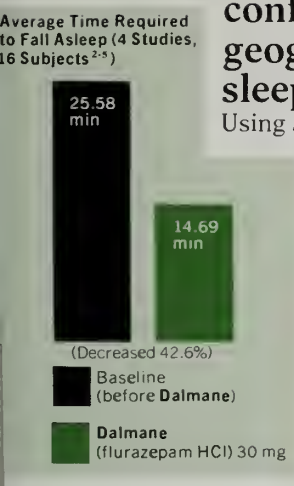
an initial benefit of

Dalmane®

(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage.[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

almane is generally well tolerated; morning "hang-over" has been relatively frequent. While dizziness, drowsiness, lightheadedness and the like have en noted most often, particularly in the elderly and debilitated, physicians ould be aware of the possibility of more serious reactions, as noted below.

fore prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, ummary of which follows:

dications: Effective in all types of insomnia characterized by difficulty in falling asleep, quent nocturnal awakenings and/or early morning awakening; in patients with recurring omnia or poor sleeping habits; and in acute or chronic medical situations requiring restful ep. Since insomnia is often transient and intermittent, prolonged administration is generally t necessary or recommended.

ntraindications: Known hypersensitivity to flurazepam HCl.

rnings: Caution patients about possible combined effects with alcohol and other CNS pressants. Caution against hazardous occupations requiring complete mental alertness g., operating machinery, driving). Use in women who are or may become pregnant only when tential benefits have been weighed against possible hazards. Not recommended for use in rsons under 15 years of age. Though physical and psychological dependence have not been orted on recommended doses, use caution in administering to diction-prone individuals or those who might increase dosage.

ecautions: In elderly and debilitated, initial dosage should be ited to 15 mg to preclude oversedation, dizziness and/or ataxia. ombined with other drugs having hypnotic or CNS-depressant ects, consider potential additive effects. Employ usual precautions patients who are severely depressed, or with latent depression or cidal tendencies. Periodic blood counts and liver and kidney ction tests are advised during repeated therapy. Observe usual cautions in presence of impaired renal or hepatic function.

verse Reactions: Dizziness, drowsiness, lightheadedness, ggering, ataxia and falling have occurred, particularly in elderly debilitated patients. Severe sedation, lethargy, disorientation and na, probably indicative of drug intolerance or overdosage, have n reported. Also reported were headache, heartburn, upset mach, nausea, vomiting, diarrhea, constipation, GI pain, nervous- s, talkativeness, apprehension, irritability, weakness, palpitations, st pains, body and joint pains and GU complaints. There have o been rare occurrences of sweating, flushes, difficulty in focusing, rred vision, burning eyes, faintness, hypotension, shortness of ath, pruritus, skin rash, dry mouth, bitter taste, excessive saliva- n, anorexia, euphoria, depression, slurred speech, confusion, tlessness, hallucinations, and elevated SGOT, SGPT, total and ct bilirubins and alkaline phosphatase. Paradoxical reactions, , excitement, stimulation and hyperactivity, have also been orted in rare instances.

sage: Individualize for maximum beneficial effect. *Adults:* 30 mg al dosage; 15 mg may suffice in some patients. *Elderly or debil- ed patients:* 15 mg initially until response is determined.

plied: Capsules containing 15 mg or 30 mg flurazepam HCl.

when restful sleep is indicated

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- **induces sleep within 17 minutes, on average**
- **reduces nighttime awakenings**
- **sustains sleep 7 to 8 hours, on average, without repeating dosage**

FERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and p disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric ociation, Washington DC, May 3-7, 1971
Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

What does man have in common with Samson?

Neither man nor the gorilla can synthesize vitamin C. Interestingly, the slow loris, a primate much further down the evolutionary scale, can convert L-1,4-gulonolactone to ascorbic acid in its liver and presumably does not require an exogenous source of ascorbic acid.

Because man can neither synthesize vitamin C nor store most of the water soluble vitamins, these nutrients must be replenished continuously in order to maintain normal tissue levels.

Generally, this is accomplished in his daily diet. But under conditions of illness, stress, in convalescence or following surgery, vitamin stores may be depleted or metabolic demands increased.

In such cases, Surbex-T may be indicated. Surbex-T restores the water-soluble vitamins with each tablet providing 500 mg. of vitamin C plus high potency B-complex.

ABBOTT

SURBEX-T® 500 mg. of Vitamin C with High Potency B-Complex

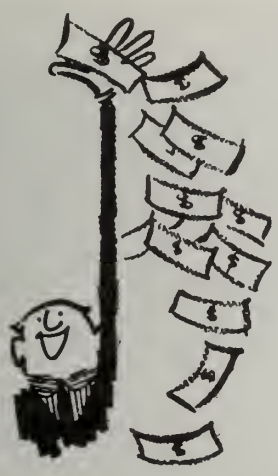
Restores what the body cannot effectively store

40348

OVER $1,000,000 IN BENEFITS PAID TO THE MEDICAL SOCIETY OF VIRGINIA MEMBERS

Long-Term Disability Insurance At Low Group Rates

A Doctor's earned income can stop when he is **SICK** or **HURT** and **CAN'T WORK**. Long-term disability insurance could provide the needed **CASH** when this happens.



Here are a few of the outstanding features of this plan:

1. Lifetime accident benefits
2. Sickness benefits for up to seven years or to age 65
3. **UNIQUE** definition of disability (7 year benefit period if sickness prevents you from engaging in your specialty)
4. Confinement not required for disability benefits
5. Federal income tax-free benefits

ALSO

As a participant in this plan you receive:

1. Special low group rates
2. Convenient local claim service

Interested? To find out more, simply return the coupon below to the administrator nearest you.

THE PRICE OF A STAMP MAY ALSO BUY YOU PEACE OF MIND

Murphy Insurance & Travel
108 2nd St., S. E.
Charlottesville, Virginia 22901
295-4157

Ernest L. Baker Associates
Suite 1118
205 34th Street
Virginia Beach, Va. 23451
425-1892

Suter Associates, Inc.
2425 Wilson Blvd.
Arlington, Virginia 22201
525-6700

G. C. French Agency, Inc.
1004 North Thompson Street
Richmond, Virginia 23230
358-7141

General Insurance of Roanoke
Shenandoah Building
Roanoke, Virginia 24011
345-8148

I would like more information about the Long-term Group Disability Insurance sponsored by The Medical Society of Virginia.

Name ..... Phone .....

Address .....

City .....State ..... Zip.....

What's on your patient's face...

may be more important than his chief complaint

Patient P.T.* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.

Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J

The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

This patient's lesions were resolved with

Efudex®
fluorouracil/Roche®

5% cream/solution...a Roche exclusive

Oriental Rugs

My name is Amir Zinat; I am Iranian. Years ago as a graduate student in the U.S., I noticed the big difference in the price of Orientals in my homeland and here. So I asked my people to send me many rugs. I have chosen, as my business, to sell these rugs at more reasonable prices. These rugs may be exchanged, are guaranteed to increase in value, are selected by natives, and the price is fully refundable.

If you are purchasing an Oriental rug, you need to learn about them. Mistakes can be costly; so know some facts before you buy:

1. There are many rugs around which may look similar to Persian ones and may be named Iranian-sounding names to confuse you. Look for the label, "Made in Iran".
2. Even all genuine Orientals are not Persian and not necessarily what you have learned about their value and durability.
3. Stores and auctioneers often sell unauthentic or worn-out Persian rugs for far too much. A good Iranian rug is not out of reach, and if it is genuine it will hold or increase its value.
4. Do not count much on the words, Princess, Contract, Signed, Collector's Item, Royal, Imperial, Prayer, etc. They are all part of a sales pitch or gossip. Rugs are named by the village or, more often, the region of origin. The quality of the rug may vary greatly regardless of the name. So, you should judge a rug by its own individual merits, not by the name.

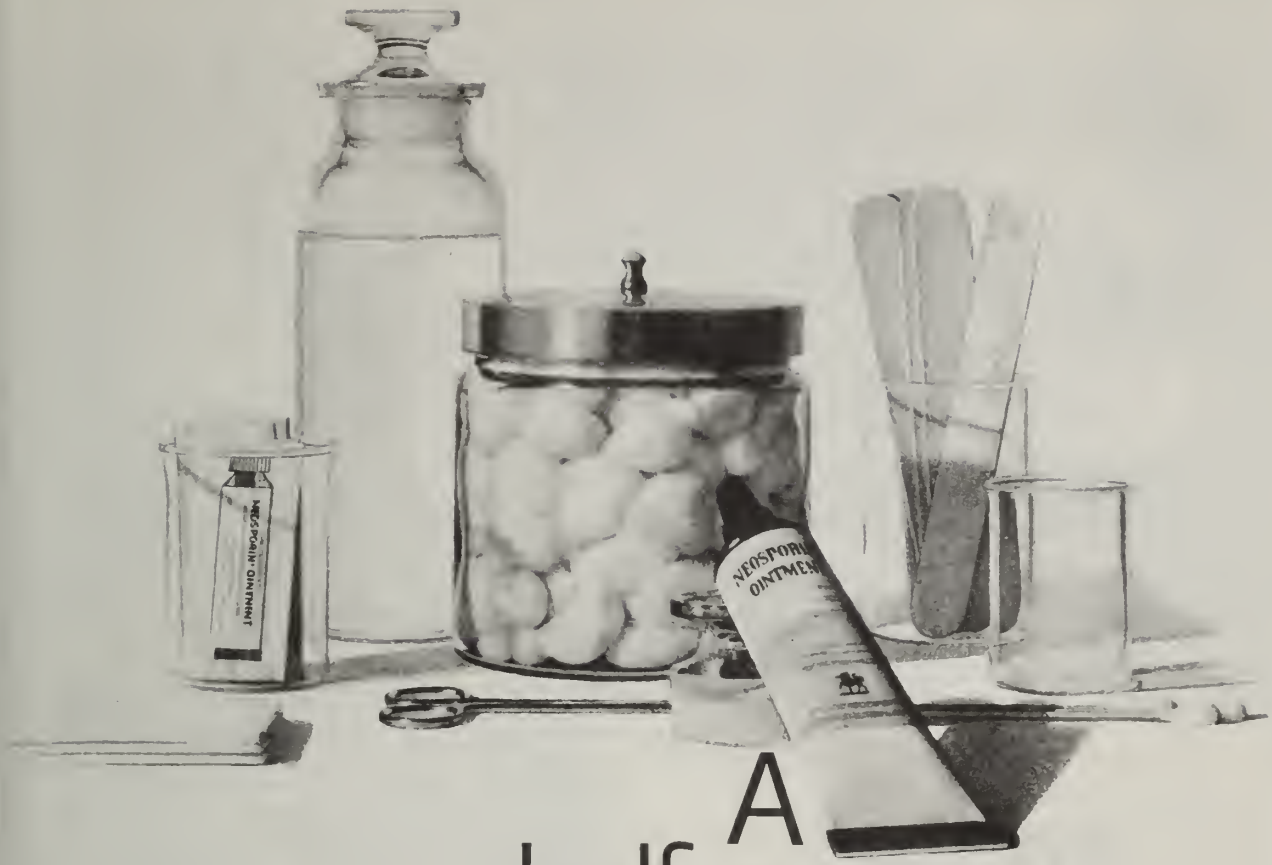
I would be happy to help you learn more about Orientals and assist you in any way in your selection.

Roller-type Loom

Please call **358-1711**
also recommend me to your friends
Thank you
Amir Zinat

2002½ Staples Mill Road
Richmond, Virginia

(on the back side of Cross Roads Shopping Center)



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started. In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare. Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced. Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

NDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic nerapy for topical infections, primary or secondary, due to susceptible organ-sms, as in: • infected burns, skin grafts, surgical incisions, otitis externa primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • second-arily infected dermatoses (eczema, herpes, and seborrheic dermatitis) traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts nd wounds accidentally incurred, its use may prevent the development of nfection and permit wound healing.

ONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum perforated. This product is contraindicated in those individuals who have nown hypersensitivity to any of the components.

ARNING: Because of the potential hazard of nephrotoxicity and ototoxicity ue to neomycin, care should be exercised when using this product in treating xtensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome / **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

HE'S STUCK BY YOU FOR YEARS. CAN YOU TAKE A CHANCE ON HIS RETIREMENT?

He's more than a name on a payroll check. He's been a friend and willing worker since way back when.

But now he's getting on toward retirement age. And what can you tell him he can look forward to then?

If you do not have a retirement trust fund or if your trust fund is being managed by amateurs, he's in for a big letdown on his retirement day.

And so are you.

You can avoid a lot of embarrassment by transferring the responsibility for investment management to our trust department. That way you can count on VNB's investment skills and know-how to be sure your friend gets the rewards he deserves.

But don't think this means meager returns. We'll be glad to furnish illustrations of how we invest and what our record has been.

So why not get together with us and your attorney to work out something for your loyal workers and yourself. Which, by the way, can help you recruit the right people to replace them when they're gone.

VNB TRUST DEPARTMENT.

VIRGINIA NATIONAL BANK

Entrapped gas...

Silent partner of GI spasm

Painful GI spasm in the presence of entrapped gas causes even more pain and more discomfort. Yet, while spasm is relieved, entrapped gas often goes untreated.

Not so when you prescribe Sidonna. Sidonna helps release entrapped gas with specially activated simethicone, a nonsystemic antiflatulent, while also helping to relieve spasm with a traditional combination of belladonna alkaloids. And Sidonna provides mild sedation with butabarbital.

Sidonna. The therapeutic partnership approach to functional or organic GI disturbances including spastic colon, irritable bowel syndrome, gastroenteritis, gastritis, peptic ulcer and nervous indigestion.

Contraindications: hypersensitivity to barbiturates or belladonna alkaloids; glaucoma, prostatic hypertrophy, pyloric obstruction. **Side Effects:** dry mouth, blurred vision, dysuria, skin rash, constipation or drowsiness. **Dosage:** one or two tablets preferably before meals and at bedtime.

Reed & Carnrick/Kenilworth, N.J. 07033

Sidonna®

Each scored tablet contains: specially activated simethicone 25 mg., hyoscyamine sulfate 0.1037 mg., atropine sulfate 0.0194 mg., hyoscine hydrobromide 0.0065 mg. (equivalent to belladonna alkaloids [as bases] 0.1049 mg.) and butabarbital sodium N.F. 16 mg. (Warning: may be habit forming.)

A working partnership against the pain of gas and spasm

SEPT. 30, 1974

PROGRAM

Sept. 30 MONDAY

7 30 a m **REGISTRATION**
Read House

9 00 a m William H Masters, M D
Virginia E Johnson, St Louis
Mo , "SEX AND SEXUALITY"

10:00 a m **COFFEE BREAK**
Exhibit Visitation

10:30 a m Louis C Lundstrom, General
Motors Corp , Warren, Mich ,
"THE STATUS OF AUTO
SAFETY" (GM ESV exhibit)

11:00 a m Joseph D. Godfrey, M D.,
Buffalo, N Y , "WHAT'S NEW
IN SPORTS MEDICINE"?

1:00 p m **LUNCHEON**
Continental Room

SPEAKER:
Joseph D Godfray, M D
Team Physician, Buffalo Bills,
"CONTACT"

2 00 p m to 4 00 p m **SYMPOSIUM**

"SEXUAL DYSFUNCTION"

William H Masters M D
and
Virginia E Johnson

Reproductive Biology Research
Foundation
St Louis Mo

(Symposium open to physicians, physician's wives and R N 's)

TENNESSEE VALLEY
MEDICAL ASSEMBLY

THE READ HOUSE

CHATTANOOGA
TENNESSEE

Sept. 30 &
Oct. 1, 1974

Wm H Masters, M D
St Louis, Mo

Wm E Thornton, M D
Houston, Texas

Virginia E Johnson
St Louis, Mo

C A Harvey, M D
Groton, Conn

Louis C Lundstrom
Warren, Mich

Peter C Gazes, M D
Charleston, S C

Joseph D Godfrey, M D
Buffalo, N Y

E C Wong, M D
Denver, Colo

W J Lewis, M D
Dayton, Ohio

Arthur Taub, M D.
New Haven, Conn.

OCT. 1, 1974

PROGRAM

Oct. 1 TUESDAY

8:00 am. **REGISTRATION**
Read House

9:00 am Wm E Thornton, M D ,
NASA, Houston, Tex.,
"WHAT'S NEW—SKYWARD"?

9:30 am C A Harvey, M D , Naval
Submarine Med Res Lab.,
Groton, Conn., "PACKAGED
ENVIRONMENTS—MAN'S
PROGRESS IN SUB-AQUATIC
SURVIVAL"

10:00 am. **COFFEE BREAK**
Exhibit Visitation

10:30 am Peter C. Gazes, M D ,
Charleston, S C , "WHAT'S
NEW IN MEDICAL OFFICE
EMERGENCIES"?

11:00 am E C Wong, Master
Acupuncturist, Denver, Colo.,
"ACUPUNCTURE AS AN ADJUNCT"

11:30 am Arthur Taub, M D , Ph D ,
New Haven, Conn ,
"ACUPUNCTURE—AN
HISTORICAL ANALYSIS
AND PHYSIOLOGICAL
CRITIQUE"

1:00 p m **LUNCHEON**
Continental Room

SPEAKER:
W J Lewis, M D , Chairman,
AMPAC Board, Dayton, Ohio,
"POLITICAL ACTION—AN
EFFECTIVE LONG-RANGE
PLAN"

2 00 p m to 4 00 p m **SYMPOSIUM**

"NEW MEDICAL HORIZONS IN SPACE AND UNDER THE SEA"

Wm E Thornton, M.D.
NASA, Houston, Texas

C A Harvey, M D
Naval Submarine Medical Research
Laboratory, Groton, Connecticut

TECHNICAL

exhibits

T.V.M.A. 1974 proudly presents an attractive, informative and well programmed display of technical exhibits. The professional representatives who staff them are capable of furnishing background information on any products they have brought to the assembly. Plan to spend some time each day viewing the exhibits.

EXHIBITS WILL BE OPEN FROM 9 00 A M UNTIL 4 00 P M

The Rx that says "Relax"

BUTISOL Sodium provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol C III SODIUM®
(SODIUM BUTABARBITAL)

Contraindications: Sensitivity or idiosyncracy to barbiturates; history of manifest or latent porphyria or marked liver impairment; respiratory disease with dyspnea or obstruction; history of addiction to sedative/hypnotic drugs; uncontrolled pain, to avoid because of possible excitement.
Precautions: Exercise caution in: moderate to severe hepatic disease; anticoagulant therapy, because of possible increased metabolism of coumarin anticoagulants; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects.
Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in those with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
Available as: Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL
Laboratories, Inc., Fort Washington, Pa. 19034 © McN 1971

DARVON®
COMPOUND-65
65 mg. propoxyphene hydrochloride, 227 mg. aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine
Darvocet-N® 100
100 mg. propoxyphene napsylate and 650 mg. acetaminophen
Lilly
Additional information available to the profession on request.
Eli Lilly and Company • Indianapolis, Indiana 46206
400760

The Virginia
MEDICAL MONTHLY

September, 1974
Vol. 101, No. 9
Whole No. 1468

Guest Editorial . . . .

Enough!

THAT POLITICIANS HAVE GALL and can "raise the bile" does not make them good abdominal surgeons. That physicians can use hyperbole and utter ringing catch-phrases does not, by the same token, make them necessarily good politicians!

This is by way of wondering of my esteemed colleagues who continue to rail against the PSRO "devil", honorable though their intentions may be, whether their judgment at this time is altogether "politic?"—whether this debate, which might be a noble one in another time and another place, is not at this point only a self-immolating exercise which, if carried on much longer, may indeed itself become the instrument of our demise?

As the heir of nine generations of medicine in this country, I deplore the prospect of such a possibility and strongly urge that we put an end to this divisive colloquy for now. To that end I submit to you this exegesis:

1. The law cannot be repealed at this time.
2. Even if it could, it probably shouldn't be.
3. If it can't be (or until it is), we must be the ones to implement it but, most importantly, we *must cease immediately* to combat the issue.

One—Getting from one to three isn't so easy, but if the perspective is grasped correctly, number one becomes fairly obvious: Although this law uses *quality* control as a mechanism, it remains quite obviously no more than a *cost* control device for the government and not even the government pretends anything else: As such, therefore, it is not only not unreasonable, but it is also not going to go away. Perhaps if Medicare had never been passed or if physicians weren't taking money from the Federal Government every day, the law *would* be unreasonable and could and should be fought as Medicare should have been fought in 1965. All of the negative advisories about repeal are based on this fact, plus the general truth that Congress will likely never repeal a bill before it has been tried, even if they were already convinced of its certain failure (which they aren't). Of course nothing is impossible, but common sense tells me that for now this issue is a dead horse that really doesn't warrant whipping any more. Certainly if it were established that the law is unconstitutional by way of the courts, then we would

have a horse of another color, but one which would still be affected in nowise by any amount of teeth-gnashing or breast-clutching on our part (one presumes).

Two—This law, apart from being nine years in the coming, is amazingly benign. All those items in the law which seem to offend us most are old items already passed with the Medicare law and only restated in the Bennett amendment. Every bit of the invasion of privacy, National standards, third party control, and all the rest were conferred upon Federal Agencies by PL 89-97 (Medicare) which many of us seemed to be unaware of at the time and some remain unaware of even now. The net effect then of Senator Bennett's law is actually to take back most of the privileges usurped in 1965 and hand them back to us in 1974! These functions, moreover, were not only granted but have actually been implemented over these nine years, albeit with a "low-profile", but I have no delusions that should this new law be repealed, that profile would no longer be so low. And let's not forget the rest of those bills rattling around federal halls that PSRO has precluded. They were no favor to you or to Medicine to say the least; nor were they intended to be; nor are they gone nor forgotten! In sum, I am suggesting that a repeal of this law right now, if it were possible, would be not only a useless victory but moreover beg disaster for us all. That all the anger and righteous indignation being directed against the PSRO Law is sorely misdirected and ought instead be reserved for issues more pertinent to nullifying that spectre of federalization which frightens us all so badly.

None of which is to say that this law couldn't or shouldn't be amended in its most odious particulars for this is a goal of quite realistic dimensions. There is, in the last analysis, much in this law which can be good for medicine but to restrict it successfully to the limits of its own value will probably take some amount of alteration and a great amount of involvement. Which brings us then to—

Three—If it can be appreciated that the law is here to stay for a while, it is then immediately obvious that the debate must cease at once. For apart from its single grace, that it has galvanized American medicine like little else in our history, it is from then on an eminently disastrous exercise. Disastrous because we can ill afford to prolong this lethal dismemberment of ourselves any further. Disastrous because we cannot afford to waste the political ammunition expended in waging the fight. Disastrous because we cannot afford any longer to ignore the other gallows-scaffolds being rigged on Capitol Hill. Have we really no more important things to be about? Do HR 13870 and HR 12053 and S3 and S2441 and S3585 and HR2222 and S2970 really mean nothing to us, that we can rummage about with PL 92-603 this long?

And as for who should do it, whom else would you have?

* * *

Gentlemen, I say enough! Enough bleating about the PSRO weasel when the wolf is in the fold. Enough of keeping Virginia's wounds festering. Enough of innuendoes that those who propose getting on with this law are too naive to understand the extrapolations of bureaucracy—or too colloquial to identify the motives of the Congress that passed the law—or perhaps may even hear some other drummer rat-tat-tatting about in the ether.

Really!

I propose, it is not Thoreau or Patrick Henry or Solzhenitsyn that this is all about. It is pragmatism and common sense and tactics, if you will. I suggest that it does an exceeding disservice to us all to continue disemboweling ourselves over a battle that has already been lost and was probably not worth fighting in the first place. Therefore, before we bleed ourselves entirely to death in search of Pyrrhic victories I beseech us all to have done with this issue. Let us be quiet. Let us take care not to appear foolish. Let us heal our wounds and rejoin ourselves lest we become the new Quebec. Let us get on with it for while we remain so thus diverted, the "gallows-builders" are hammering.

Or to say it all slightly differently, for those who seek their parables in history, look back now to Balaklava's epic "600". That tragically useless charge of British cavalry into powerful Russian artillery emplacements was doomed from its inception. Mounted at the wrong time, in the wrong manner and for the wrong reasons the attack was not even of significant military importance but stands today a clear reminder of just how quickly glorious gallantry can die at the hands of lousy tactics!

God wot we earn a better epitaph!

Harry C. Kuykendall, M.D.

1200 Knox Place
Alexandria, Virginia 22304

The Doctor's Dilemma

L. P. LE QUESNE, D.M., M.Ch., F.R.C.S.
London, England

IT IS A VERY GREAT GOOD FORTUNE for us in Great Britain that you in the United States speak the same language as we do, for it means that we can without the difficulties of a language barrier share in the riches of American surgical endeavour. Not only do we speak the same language, but our whole approach to surgical problems is so similar that it is easy to overlook the fact that we work in essentially different systems of medical care, in that in Great Britain there is a comprehensive National Health Service in which practically all doctors work, at least to some extent, although of course there are still opportunities and facilities for private medical care outside the service. With your understandable pride in the great medical institutions of this country and in their achievements, which rightly have brought them world wide acclaim, it is I think a source of wonder to Americans, both doctors and laymen, that we in England seem reasonably satisfied with our system.

Over 300 years ago, in one of the great public debates which took place in England at the time of our Civil War, one of the speakers (in the Army debates at Putney, October 26, 1647) said "The poorest He that is in England hath a life to live as the greatest He." There is no doubt that it is the general philosophy encapsulated in this sentence, broadening out through the ensuing years, which led to the setting up of the National Health Service in 1948, and with the passage of years since then there is no good evidence that the people in Britain would wish to go back on this decision —indeed, with the increasing cost of medical care the view that a National Health Service is necessary is more widely held than previously. Furthermore, despite all the faults and imperfections of the Service, it is generally believed that, discounting the advances of medicine itself in these years, the overall effect of the Service has been beneficial. There are many ways in which this view could be substantiated, but perhaps the outstanding achievement has been the extension of the availability of skilled medical care. Whereas, prior to the development of the Service, the essential determinant, outside the great medical centres of the country, of the number of trained physicians and surgeons working in any community was the number who could make a living in private practice, now the number is more closely related to the needs of the community.

But what do the doctors think of the Service? Here a word of caution is required, because if you come to England you will find that doctors are constantly criticising the Service: you would do wrong to think that this indicates a desire to do away with the Service, rather it indicates a desire to improve it. There are, I suspect, many similar analogous situations in your own country. There is no question but that at the time of the inception of the Service many doctors were apprehensive, even hostile, but few now would wish to abolish it, though many wish to alter it in various ways. Why, then, do they support it? Amongst many reasons I will cite but two. First, doctors appreciate the situation in which the patient, in seeking advice, need not be influenced by any personal anxiety about the immediate cost of treatment, and as a result the doctor has more freedom of action. Secondly, there is a widespread belief that in the present day the provision of a full medical service, and the training of doctors including the organisation of continuing postgraduate education is such a complex activity that, accepting the problems it brings, it can only be

After Dinner Address to the Southern Surgical Association, Hot Springs, Virginia, December 4, 1973.

achieved effectively through some sort of comprehensive service.

Closely bound up with the doctors' reaction to the Health Service is the question as to how they have fared, both professionally and socially. It would not be appropriate for me to comment on the professional achievements of my colleagues, but one observation I can make. In his professional life, undoubtedly one of the most important requirements for a doctor is his clinical freedom, and certainly that has not been infringed. As far as the social position of doctors is concerned, they are still, as previously, widely respected, but of course their social position is closely bound up with their economic situation. A simple answer to the problem of the effect of the Health Service upon the economic position of doctors is difficult, as different sections of the profession have been affected in different ways. For instance, whereas initially consultants were proportionately better off than general practitioners, this is no longer the case; undoubtedly the emoluments of consultants as a whole require revision to ensure continuing recruitment. In addition, it must be remembered that there is still private practice, and the extent to which this influences the standard of living of doctors varies greatly from specialty to specialty, and area to area. Furthermore, whereas previously individual doctors had to make their own provision for retirement, now there is a pension scheme which also makes some provision for widows. Given all these factors, which make an overall judgment very difficult, it is still true to say that at least to date the Health Service has not had a profound effect on the economic position of doctors. Certainly, it does not appear to have diminished the attractiveness of the profession, for the competition for places in the medical schools is greater than ever, and the quality of the applicants higher.

Having said this, it is also probably true that the overall economic and social position of doctors in Great Britain is less secure than say 30 years ago, but to a considerable extent this reflects changes in Society as a whole. It is certainly true in Great Britain, and I suspect also in the United States, that most of us grew up in a profession which in many ways reflected the values and standards of the relatively static society of the early years of this century—a society in which the learned professions as a whole were highly revered and in general highly rewarded. There is no implicit reason why this should always be the case. In the Western world we live in a society which is in a state of change, a change which affects amongst other things the position in that society of the members of many occupations and professions. As doctors the type of life we live and of medicine we practice cannot fail to be influenced by these changes. The relations between doctors and the public are certainly different from 30 years ago, and I suspect that these changes will continue, often in a manner initially disconcerting to doctors.

To an extent these changes are the result of the achievements of medicine itself, for undoubtedly patients expect more from doctors than hitherto. These expectations increasingly appear as demands upon the profession, as the public comes to consider that the benefits of modern medicine are their right, and not something only to be obtained by significant, personal financial sacrifice. In addition to this, modern medicine is increasingly concerned with preventive, public health aspects of health care, obvious examples being cancer prevention programmes and population control, to name but two. These developments affect medicine in a subtle but profound way, for they do not essentially depend upon the close personal relationship between doctor and patient characteristic of the traditional situation, but they more depend upon the provision of a service.

I chose for my title this evening Bernard Shaw's phrase "The Doctor's Dilemma", and in making this choice it was this sort of problem that I had in mind, for I feel that it does face us with a real dilemma. Traditionally the relationship between a doctor and his patient is entirely personal. The advantages for the

individual patient that result from this are well-known to us all and must be guarded, and yet we live in a society in which increasingly the demands are made impersonally on the profession as a whole and not upon the doctor as an individual. Medicine is becoming less personal, and as individual doctors we feel threatened by this.

I hope that by nothing I have said you feel that I have had the temerity or impertinence to suggest to you that in Great Britain we have resolved this dilemma, for such is not the case. In relation to these problems we have struck a balance which is different from yours, but in so doing we have created new problems. I believe, for instance, that we are in danger of creating too organised a system, with insufficient room for individual initiative. Previously I mentioned that a major achievement of our health service has been to provide a more even spread of skilled, specialised care, but we have yet to resolve the conflict between such a policy and the need to support and staff adequately institutions, such as University Hospitals, devoted to the pursuit of excellence. Furthermore, we have yet to educate the public to the concept that if they have their rights, they have also, in their own interest, the obligation to see that the status of the profession is protected.

Speaking for myself, and I believe for many of my colleagues, I know that I dislike grappling with these problems, and that it is easier to concentrate on the problems in the laboratory and operating room that I have been trained for. And yet I also know that many of us in the profession in Great Britain feel that some of our current difficulties are of our own making, and result from the fact that we have not paid sufficient attention to these problems. At a time when the technical practice of medicine is more interesting and perhaps more demanding than ever before it is daunting to grapple with these problems, and yet I believe that the manner in which we come to terms with them will be a major factor in determining the respect in which we are held in the years to come.

Department of Surgical Studies
The Middlesex Hospital
London, WIN 8AA, England

New Drug Proves Helpful in Controlling Seizures

A new drug—Tranxene—has proved successful in controlling seizures in some epileptics who had not been helped by other drugs, says a research report in the July 29 issue of the *Journal of the American Medical Association.*

Tranxene, known generically as clorazepate dipotassium, has been used in Europe for several years, and has recently been introduced into the United States.

Despite treatment with standard antiepileptic drugs, many patients continue to have seizures, says the research report by Harold E. Booker, M.D., of the Epilepsy Center of the University of Wisconsin Center for Health Sciences, Madison.

Dr. Booker reports on treatment with Tranxene of 59 patients whose seizures were intractable to treatment with standard antiepileptic drugs. Excellent results were seen in 20 patients, some received partial help, and some did not respond at all.

Tranxene worked only when used in conjunction with other drugs. The new drug alone did not control seizures.

Newborn Transport in Virginia

PETER W. HOUCK, M.D.
Lynchburg, Virginia

The development of special newborn transport vehicles operated by trained transport personnel promises to lower the neonatal death rate significantly.

NEONATAL INTENSIVE CARE UNITS (NICU's) for the high risk newborn have greatly reduced the neonatal death rate in areas of the United States[1-5] and in other countries.[6,7] Most critically ill newborns are not fortunate enough to be born in a hospital with a NICU. Transporting high risk newborns from outside hospitals to NICU's is arduous and cumbersome when using outdated vehicles and untrained personnel. It has recently been reported that the newborn death rate in referring hospitals can be reduced significantly if skilled transportation facilities and a team of trained health professionals are used. This concept of regional transport is being developed in Virginia encompassing a regional plan which utilizes the already established Newborn Intensive Care Units in Charlottesville, Fairfax, Lynchburg, Norfolk, and Richmond. The regional plan was piloted in Lynchburg early in 1973, as a prototype for the adoption of a statewide plan. The purpose of this report is to describe the system of newborn transport from the Virginia Baptist Hospital in Lynchburg, and, to acquaint medical communities in our State with a long range plan for regional neonatal transport in Virginia.

Lynchburg: Pilot Study

Newborn transport was initiated in March, 1973, from the Virginia Baptist Hospital in Lynchburg as part of a program for improved newborn care. (Table I) The program encompassed the merger of the pediatric and obstetrical services into one local hospital. The merger facilitated the construction of the NICU which became operational in November, 1972. The NICU has combined routine premature care with intensive care for infants from birth to age six months. Routine skin, throat and stool cultures were obtained on all admissions to assess the septic risks of outside admissions versus inpatients over a six month period, and, there was little difference in the bacterial colonizations. Thus, it was concluded that outside admissions were not increasing the risk of bacterial spread in the NICU. The NICU in Lynchburg is the first in Virginia operating in a community hospital with no house staff and without a hospital based neonatologist. The team approach is utilized with the broad support of the pediatricians, intensive training of neonatal nurses and respiratory therapy personnel, and the use of a pediatrician with extra training in neonatology. Associated with this collective effort there has been a significant drop in the neonatal death rate in Lynchburg since 1971. (Table II)

TABLE I

PROGRAM FOR IMPROVED NEWBORN CARE

Nov.	1971	Special equipment purchased (monitor, oxyhoods, open incubators).
June	1972	Respiratory therapist arrived.
Aug.	1972	Merger of obstetrics and pediatrics into one community hospital.
Oct.	1972	Neonatal ICU, completed and opened.
Feb.	1973	Neonatal regional transport established.
March	1973	Perinatal committee formed to discuss better care in the delivery room.
April	1973	In hospital newborn emergency team formed.
June	1973	Newborn transport vehicle use initiated.
Sept.	1973	Regional newborn conference to improve communication.

Newborn transport was started four months after the opening of the NICU. A team of paramedical professionals including rescue squad personnel, neonatal nurses and respiratory therapy staff were oriented and trained to make trips within a sixty mile radius. Referrals were made from Farmville, Bedford, and South Boston to Lynchburg, and from Lynchburg to Charlottesville. In June, 1973, a new specialized newborn transport vehicle was made operational. It was equipped with special temperature control and lighting devices, monitoring equipment, oxygen and suction facilities and enough room for three or four people to maneuver in an upright position. (Fig. 1) Essentially, the vehicle has a small intensive care room mounted on a large truck chassis base. (Fig. 2) It is noteworthy that the entire vehicle was funded by regional civic funds, regional Jaycee chapters and March of Dimes chapters, and has operated at no cost to the patient other than a small fee for the neonatal nurse and respiratory therapist. The Lynchburg Life Saving Crew and Rescue Squad has operated and maintained the vehicle on a volunteer basis.

TABLE II

NEWBORN DEATHS IN LYNCHBURG

YEAR	NEWBORN Deaths	LIVE Births	Rate Per 1,000 Live Births	NEWBORN DEATH RATE†	
				Virginia	U.S.A.
1970	50	2,854	17.5	16.3	14.9
1971	53	2,837	18.7	15.5	14.3
1972	33	2,695	12.2	16.1	13.7
1973	22	2,380	9.2	*	*

*Not yet tabulated.
†From Virginia State Department of Health, Statistical Annual Report, Richmond, Virginia.

Fig. 1. Sergeant Wade drives the newborn emergency vehicle out of the crew hall.

Fig. 2. Demonstrates the roominess of the vehicle. Looking in from the rear entrance.

The transported infants diagnoses varied from extreme prematurity, hyaline membrane disease to surgical disorders. (Table III) The decision for referral, however, is not made according to a diagnostic criteria but a *symptomatic* criteria, (Table IV), as the diagnosis

may not become apparent until after transport. At the discretion of the referral physician the transported babies were transferred to Lynchburg or directly to a university center (Charlottesville) depending on the nature of the disorder and the physicians preference. Also transport criteria will vary from one hospital to the next depending on facilities and staff in the referral hospital.

Fig. 3. The inside of the intensive care module of the newborn transport vehicle. Dr. Robert Cox, Mrs. Larry Guill, R.N., and Sergeant S. M. Wade in attendance. Note the transport incubator in place.

To improve communications between referral hospitals in the Lynchburg region an Intra-regional Conference was assembled in September, 1973. Nurses and physicians from the region attended the conference to meet each other and discuss neonatal problems.

Fig. 4. Crew Sergeant Wade examines the oxygen, suction and compressed air support systems in the forward end of the module.

With the further development of regional transport, data will be tabulated to stress the efficacy of newborn transport in improving regional newborn survival. The Lynchburg transport effort is the first known to have developed from a Community Hospital, based entirely on community funding, operating at very little cost and relying heavily on a diffuse pediatrician base.

TABLE III

Diagnoses on 25 Transported Neonates in the Lynchburg Region in 1973

Hyaline Membrane Disease (or Respiratory Distress Syndrome)	6
Aspiration pneumonia	2
Pneumothorax	2
Prematurity alone	4
Congenital heart defect	3
Transient tachypnea	1
Congenital hepatitis	1
Extreme jaundice	1
Surgical Conditions	
Hirschsprungs Disease	1
Hiatal hernia	1
Hydrocephalus	1
TE fistula	1
Omphalocele	1
Intestinal reduplication	1
Congenital renal anomaly	1

TABLE IV

Criteria for Transfer*

Respiratory distress-rate 40/min.
Abdominal distention
Excessive salivation
Extreme jaundice
Cyanosis without respiratory distress
Seizures
Congenital anomalies
Weight less than 1500 grams

* Adapted from references 8, 9.

Scope

The Fetus and Newborn Committee of the Virginia Academy of Pediatrics embarked on the decision to explore methods for improved newborn transport in November, 1972. Lynchburg originated the regional transport concept as a test for other areas to consider. A select committee of representative physi-

cians from six Virginia regions (Norfolk, Richmond, Charlottesville, Lynchburg, Abingdon, and Falls Church) met in Lynchburg on September 15, 1973, with Dr. Sidney Segal and Dr. Herman Risemberg, both noted experts in the field of neonatal transport. The committee evaluated the results of newborn transport in British Columbia, the State of Maryland and the region of Lynchburg. It was the concensus that the State of Virginia needed immediate upgrading of its newborn transport based on the newborn death rate in Virginia which ranks high as compared to other states, even some rural states such as Arkansas. (Table V) The endeavor was

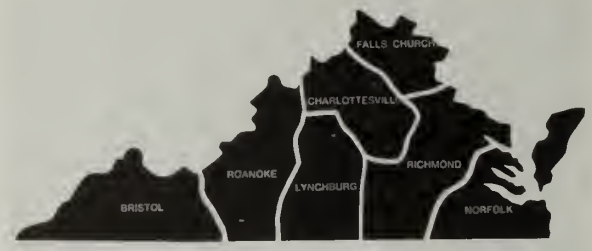
TABLE V[12]

NEONATAL DEATH RATE FROM 1959 TO 1969 IN VIRGINIA**

Year	*Rate*	*Standing*
1959	21.6	42
1960	21.0	42
1961	20.1	38
1962	21.0	44
1963	20.9	44
1964	20.3	44
1965	18.8	39
1966	18.6	42
1967	17.6	41
1968	17.0	40
1969	16.7	42
1970	16.3	
1971	15.5	
1972	16.1	
1973	*	

* Data not tabulated
** From Bureau of Vital Statistics, Washington, D. C.

given an added boost by the State Jaycee organization who adopted newborn transport as a State project for their 165 local chapters, and the Fidelity National Bank of Lynchburg. Thus, a plan was devised to promote the upgrading of rapid, safe access of high risk newborns to the already established NICU's in Charlottesville, Falls Church, Lynchburg, Norfolk, and Richmond (see map). The regions were loosely defined considering the number of births in surrounding hospitals, and road access to the referral center. Methods for improved air and ground transport in the Southwest were evaluated and will be further explored. The overall plan was unanimously approved by the State Fetus and Newborn Committee which met in Charlottesville on October 4, 1973. This committee will move ahead to further define the specific regions,



organize transport personnel and special newborn transport vehicles for each region, and expose the concept to the regional hospitals. NICU's in surrounding states are being notified to establish better relationship for transporting across state lines.

Discussion

Neonatology has been a rapidly developing specialty in pediatrics which is both time consuming and expensive, thus, rendering specialized care mostly confined to larger university teaching hospitals. Smaller community hospitals have had to struggle in many cases with limited facilities and personnel in managing high risk neonates, or, subject them to a stressful trip to a university NICU with outmoded ambulances and untrained attendants. For improved newborn transport the responsibility will have to shift from the referring hospital to the central hospital. It is indeed impractical for sixty smaller hospitals in Virginia to individually organize a team of personnel and purchase a $15,000 vehicle. Air transport to University NICU's is also not a pragmatic approach. The expense of heliports, helicopter maintenance, weather conditions and the difficulty of administering newborn care in a noisy, vibrating air vehicle is undesirable, although there may be a limited future role for air transport in areas of the southwest which entails long distances over mountainous terrain with a ground vehicle. The need for one or more secondary NICU's in

the western part of the State seems apparent. It has been demonstrated in Lynchburg that a community hospital NICU can operate effectively utilizing trained paramedical personnel and broad pediatric support. Although a full time neonatologist would be optimal, part time neonatal consultation is feasible. However, it is also wise to consider a poorly run NICU can do more harm than good,[10] so the effort to develop a secondary NICU must be carefully conceived. For a community hospital to embark on NICU development without neonatology coverage and continuous staff training is to invite disaster.

Neonatal transport has been delayed in this country as compared to some other countries such as Canada[6] and Sweden.[11] Arguments against neonatal transport have been the overexpense for little benefit gained, the perpetration of cerebral palsy in infants, the unreliability of the neonatal death rate as a guideline of good care, and local pride in present hospital facilities. These arguments have gradually given way to a new awareness that the cost need not be excessive as the Lynchburg study demonstrated. The neonatal death rate is becoming a more consistent figure of perinatal conditions with better reporting, and brain damage need not be perpetuated even in the small premature.[4,13,15] Pride in local nurseries is important and conditions will vary from nursery to nursery depending upon the size of the hospital and availabilities of doctors and nurses. It should be suggested, however, that the new awareness of what can be done for high risk newborn penetrates deeply into every medical community with an obstetrical service. Now that the barriers to newborn transport are being eliminated there is every indication that the comparatively poor newborn death rate in Virginia can be dramatically reduced. The reduction of neonatal deaths associated with intensive care in cities such as Lynchburg can extend out to referring hospitals as has been demonstrated by regional plans in other states.[13,16] If the State of Virginia with 73,000 births decreased the newborn death rate by only 25% it would mean an increased survival of nearly 300 newborns per year.

With the decreased birth rate and smaller families, parents are becoming more interested in the best possible conditions for their high risk babies. The success of regional newborn transport will depend on the good judgment and acceptance of the idea by the local pediatricians, obstetricians, and family physicians.

Acknowledgment: Thanks to the information accumulated by Mrs. Carolyn Markam and Mrs. Margaret Mangus this article was made possible.

Bibliography

1. Controlled Trial of Intensive Care for Very Low Birth Weight Infants. Ped. 48: 711, Nov. 1971.
2. Infants of Less than 1000 Grams: Results of Intensive Care. Ped. 50: 40, July, 1972.
3. Schaffer, A. J., and Avery, M. E.: Disease of the Newborn. ed. 3, Philadelphia, 1971, W. B. Saunders Company.
4. Rawlings, G., Reynolds, E. O. R., Stewart, A., and Strang, L. B.: Changing Prognosis for Infants of Very Low Birth Weight. Lancet 1:516, 1971.
5. Stahlman, M.: What Evidence Exists that Intensive Care Has Changed the Incidence of Intact Survival. Problems of Neonatal Intensive Care Units, Report of the Fifty-ninth Ross Conference on Pediatric Research, Columbus, Ohio, 1969, Ross Laboratories.
6. The Regional Organization of Special Care for the Neonate. Ped. Clin. N. A. 17: 761, Nov. 1970.
7. The Obstetrician and the High Risk Infant. South Afric. M. J. 1:233, March, 1969.
8. Transport of High-Risk Newborn Infants Manual. Edited by Sydney Segal, M.D.: Canadian Pediatric Society, 1972.
9. Ellis, W.: The Regional Newborn Center: the Effect on Neonatal Mortality of Referring Hospitals. Scientific exhibit, Annual Meeting, Medical Society of New Jersey, May 6, 1972.
10. Erickson, S.: Infant I. C. U.'s Save Lives—But Too Many Units May Add Cost and Hamper Growth. Modern Hospital pp. 80-84, Oct. 1970.
11. JAMA 223: 12, pp. 1369-1375, March 19, 1973.
12. Department of Health, Education and Wel-

fare, Public Health Service, National Center for Health Statistics. Vital and Health Statistic: *Infant, Fetal, and Maternal Mortality*, UA 1963. Government Printing Office, Washington, D. C., 1966, PHS Publication No. 1000, pp. 32-33.

13. Ellis, W. C., and Chaubal, V. T.: The Forgotten Newborn. Read before the Society for Pediatric Research, Atlantic City, N.J., 1971.
14. Kitchen, W. H., and Campbell, D. G.: Controlled Trial of Intensive Care for Very Low Birth Weight Infants. Ped. 48: 711-714, 1971.
15. Dweck, H. S., and Saxon, S. A.: Early Development of the Tiny Premature Infant. Am. J. Dis. Children 126:28-35, 1973.
16. Graven, S. N., Howe, G., and Callon, H.: Perinatal Health Care Studies and Program Results in Wisconsin, 1964-1970. Presented at the Spring Session of the American Academy of Pediatrics, San Diego, April 24-27, 1972.

1901 Thomson Drive
Lynchburg, Virginia 24501

Clinical Center Study of Patients with Localized But Inoperable Breast Cancer

The cooperation of physicians is requested in the referral of patients with suspicious lesions or proven breast cancer for studies now in progress at the Clinical Center, National Institutes of Health, in Bethesda, Maryland. These studies are being conducted by the National Cancer Institute, Medical Breast Cancer Service and Surgical Breast Oncology Section.

To be eligible for this particular study the patients must have suspicious or proven inoperable breast cancer but without metastatic lesions. This would include patients who are less than 65 years of age with one or more of the following findings: peau d'orange involving greater than 1/3 of the breast; inflammatory carcinoma; lesions greater than 5 cm with pectoral fascia or muscle fixation; chest wall fixation; palpable infraclavicular nodes, or edema of the arm.

It is preferable to have the initial biopsy performed at the Clinical Center in order to obtain tumor marker and estrogen binding information. However, this is not a prerequisite for entry to the program.

Physicians interested in further details or having their patients considered for admission may write or telephone: Douglass C. Tormey, M.D., Ph.D., Chief, Medical Breast Cancer Service, National Cancer Institute, Building 10, Room 6B-02, Bethesda, Maryland 20014, (Area Code 301) 496-1547, *or* Ernest V. deMoss, M.D., Admitting Officer, National Cancer Institute, Building 10, Room 10B-18, Bethesda, Maryland 20014, (Area Code 301) 496-4001.

Medical Grand Rounds . . . .

From the Department of Medicine, University of Virginia Medical Center

Edited by:

EDWARD W. HOOK, M.D.

Nephrolithiasis

Discussion by:

JOHN F. KIRALY, III, M.D.
RICHARD E. KATHOLI, M.D.

Dr. Edward W. Hook: The topic today is nephrolithiasis. It will be presented by our Chief Medical Residents. Dr. John Kiraly will discuss the etiologic aspects and Dr. Richard Katholi will discuss evaluation and treatment. Several brief case presentations will provide examples of problems caused by different types of renal stones.

Case Presentations

Case #1. *Calcium oxalate stone with idiopathic hypercalciuria*

A 29 year old white male was admitted to the hospital on August 8, 1973, with a 24 hour history of intermittent colicky left flank pain. Physical examination was unremarkable. The hematocrit was 48 per cent and the white blood cell count was 9500. The urine had a specific gravity of 1.023, a pH of 5.0, and contained 2 white cells per high-power field and innumerable red blood cells. The urea nitrogen was 17 mg. and the serum creatinine was 1.1 mg. An intravenous pyelogram demonstrated an opaque left ureteral calculus.

Seven days after admission a left ureteral lithotomy was performed, yielding a 186 mg. calculus which on crystallographic analysis was 50% calcium oxalate monohydrate, 35% calcium oxalate dihydrate, and 15% hydroxyl apatite. Serum calcium values were 8.8, 9.7, and 10.1 mg., phosphorus values were 3.3, 3.6, and 3.7 mg., and uric acid values were 4.7, 5.0, and 5.0 mg. The alkaline phosphatase was 100 international units and the albumin was 4.2 g. Urine calciums were 499 and 480 mg. per 24 hours (normal less than 250 mg. per 24 hours). The patient was discharged on the ninth hospital day and was free of stones at one month follow-up.

Comment: "Idiopathic hypercalciuria" is the most common cause of stone disease in the United States and typically occurs in young white males. This patient should be followed and if recurrences are frequent a trial of hydrochlorothiazide may be beneficial, as discussed subsequently.

Case #2. *Magnesium Ammonium Phosphate Stones with Stasis and Infection*

A 67 year old female was admitted to the hospital on September 13, 1972, because of a one month history of recurrent fever, chills, and right flank pain. Thirty-three years previously she had the onset of multiple sclerosis. Fourteen years ago she developed a neurogenic bladder and a vesicle calculus which were treated with vesicolithotomy and a permanent suprapubic catheter. Since placement of the suprapubic catheter she has had chronic urinary tract infections which have been treated with mandelamine mandelate and various antibiotics.

On physical examination the temperature was 40°C, the right kidney was enlarged and tender, and there was spastic paraparesis of the lower extremities. The hematocrit was 31 per cent, and the white blood cell count was 17,900. The urine had a specific gravity of 1.007, a pH of 9.0, and contained 10 white cells per high power field. The urine culture grew *Proteus mirabilis* and *Pseudomonas aeruginosa*. The urea nitrogen was 19 mg. and the serum creatinine was 0.8 mg. A plain film of the abdomen and an intravenous pyelogram showed many opaque calculi obstructing the right uretero-pelvic junction. The patient underwent a right nephrolithotomy on the day of admission with removal of a 228 mg. calculus composed of 86% magnesium ammonium phosphate and 14% carbonate apatite. The urinary infection cleared with gentamicin, but on follow-up one year later Proteus urinary infection and left staghorn calculus were present.

Comment: This patient with multiple sclerosis developed a neurogenic bladder with retractory infection, and stones in the urinary tract. Infection with urea splitting organisms produces an alkaline environment which predisposes to the formation of magnesium ammonium phosphate stones.

Case #3. *Uric acid stones with hyperuricosuria*

A 33 year old woman was admitted to the hospital on May 20, 1974, for a one week history of recurrent left flank pain and hematuria. The patient had a two year history of spontaneously passing many calculi which were 100% uric acid on crystallographic analysis. The urine pH was always less than 6.0.

Physical examination revealed exquisite tenderness over the left kidney. The hematocrit was 39 per cent and the white blood cell count was 9400. The urine had a pH of 5.0 and contained innumerable red blood cells. The uric acid ranged from 3.1 to 6.1 mg. Serum calcium was 9.3 mg., phosphorus 4.1 mg., albumin 4.4 g and alkaline phosphatase 85 international units. The urea nitrogen was 9 mg. and the creatinine was 1.1 mg. Urine calcium was 85 mg. per 24 hours and the urine uric acid was 1100 mg. per 24 hours (normal less than 600 mg per 24 hours). An intravenous pyelogram showed multiple radiolucent stones in the left ureter.

On the day of admission the patient spontaneously passed nine calculi ranging from 1 mm to 6 mm in diameter. She was discharged on sodium bicarbonate by mouth.

Comment: This patient has hyperuricosuria and a persistently acid uric predisposing to formation of multiple uric acid stones. She should respond well to therapy with allopurinol and sodium bicarbonate.

Case #4. *Cystinuria with recurrent nephrolithiasis*

A 16 year old girl was in good health until age 13 when she had the onset of bilateral flank pain, fever, and Klebsiella urinary tract infection. Evaluation at that time revealed bilateral opaque renal stones on plain film of the abdomen and on intravenous pyelogram. The urine contained cystine crystals and had a positive nitroprusside test. A chromatograph of the urine showed a urinary cystine level of 1681 mg. per gram of creatinine (normal urine cystine is less than 18 mg per gram of creatinine) and two fold elevations of urinary ornithine, lysine, and arginine. She was originally treated successfully with nitrofuradantoin and bilateral nephrolithotomies with removal of multiple cystine calculi. Initial prophylactic therapy included oral penicillamine 250 mg by mouth four times a day, one pint of fluid every four hours, and sodium bicarbonate by mouth to maintain urine pH over 7.0. At age 14, the patient again developed bilateral calculi after failure to take medications for one month. Bilateral pyelolithotomies were performed and medications were resumed. A follow-up at age 15 showed a right renal stone.

Comment: Nephrolithiasis in children or adolescents is rare and usually indicates an inborn error of metabolism. Cystinuria when complicated by nephrolithiasis is always pro-

gressive unless treatment with D-penicillamine is continued indefinitely.

Discussion

Dr. John F. Kiraly: Nephrolithiasis has been recognized as an affliction of mankind for several millenia. The earliest evidence of this disease has been found in Egyptian mummies dating to approximately 4800 B.C.[1] In the United States, renal calculi have been recovered from Indian burial mounds in Illinois and Kentucky which date around 1500 B.C.[2] The disease was well known in ancient Greece as evidenced by the Hippocratic admonishment "not to cut persons laboring under the stone". Also, many historical notables have suffered from renal calculi, including Louis Napoleon III of France, Benjamin Franklin, and Sir William Osler.[3,4]

In the United States, nephrolithiasis is a common disease, accounting for about seven out of every 1000 hospital admissions and affecting approximately 0.1% of the population.[5] For the most part, nephrolithiasis is a disease of young adults with a peak incidence in the fourth decade.[6] It affects males and females nearly equally,[5] but affects the white population five times more frequently than the black population.[5] Kidney stones may occur epidemically, as, for example, in British troops in India in World War II[7] or in the famous outbreak in Norwich, England, in the nineteenth century.[8] Stone belts, areas of high incidence of kidney stones, have been described in various parts of the world, particularly in the Southeastern United States[5] (Fig. 1). In the South Atlantic states the incidence of renal calculi is nearly 33% higher than the rest of the country, and Virginia ranks fourth overall in incidence.[5] The reason for this high incidence of calculi in the Southeast is not entirely clear, but a study in Savannah, Georgia, showed a peak incidence of upper tract stones in July and August with a positive month by month correlation with the temperature. High temperatures may be responsible for dehydration which could precipitate renal calculi.

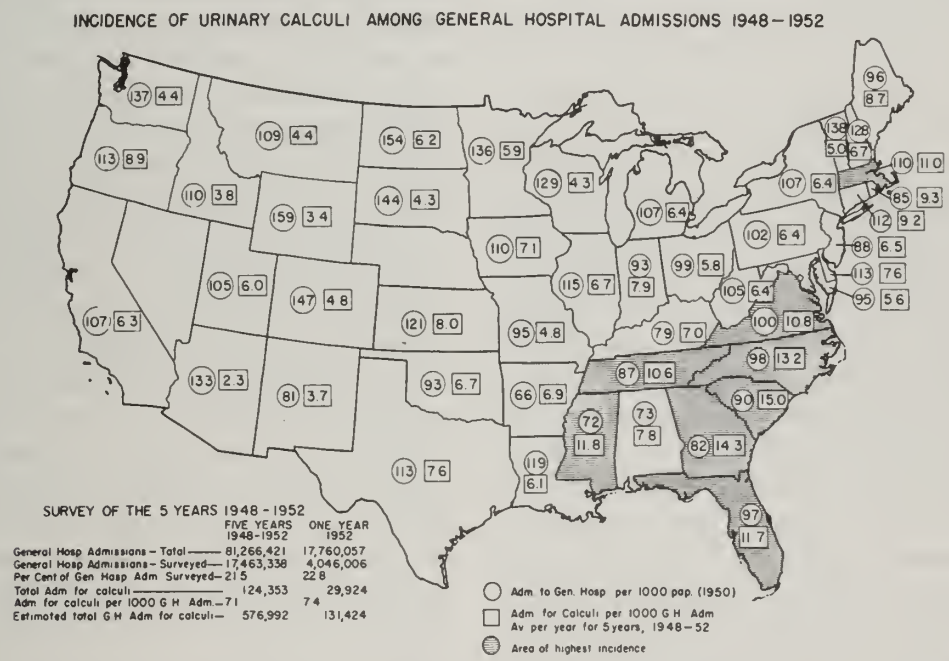


Fig. 1. The incidence by state of urinary calculi among general hospital admissions. (Reprinted by permission of the authors and editor from JAMA 161:1437, 1956.)

A fundamental understanding of nephrolithiasis in any patient is dependent on the crystallographic and petrographic analysis which identifies the stone type. Every stone is composed of matrix, a complex mucoprotein

which comprises 2-3% of the dry weight, and a crystalloid, which accounts for the remaining 97-98%.[10] Structurally, a stone may consist of one crystalloid type, patches of various crystalloids, or a nucleus of one crystalloid type which is surrounded by an outer shell or lamination of another crystalloid type. Irrespective of the admixtures of crystalloids, stones can be classified according to the major constituent, which in most cases will provide the key to the pathogenesis of the stone. Table 1 shows the frequencies of various types of upper tract stones in a series of stones analyzed from Boston University,[11] The Massachusetts General Hospital[12] and the University of Virginia Hospital.[13] Calcium oxalate stones are the most common, with 50-80% of all stones having this crystalloid as the major constituent. Case #1 illustrates the association of calcium oxalate stones with hypercalciuria, as well as the characteristic radiopacity of this stone type on abdominal films. Calcium phosphate stones account for 0-17% of all stones and have the same radiopacity and clinical significance as calcium oxalate stones. Magnesium ammonium phosphate stones account for approximately 10% of all stones and are characteristically seen in association with urinary tract infection[5] with urea splitting organisms, such as Proteus, which produce an alkaline urine with pH values persistently over 7.0. Case #2 illustrates the association of magnesium ammonium phosphate stones with stasis of urine, Proteus infection, and alkaline urine pH. These stones are also radiopaque and may have a nucleus of calcium oxalate or calcium phosphate which represents the true underlying stone disease. Uric acid stones comprise about 10% of stones in the United States; they are radiolucent and are generally associated with a persistently acid urine with a pH less than 6.0. Case #3 is a patient with hyperuricosuria and uric acid stones that recurred in persistently acid urine. Not all radiolucent obstructions in the urinary tract are uric acid stones, since very rare xanthine stones, blood clots, or sloughed renal papillae can cause radiolucent obstructions.

TABLE 1

Crystalloid Composition of Stones

Composition	% Total B.U. (1000)	No. Stones MGH (155)	U.Va.H. (65)
Calcium Oxalate	68	49	78
Calcium Phosphate	5	17	0
Magnesium Ammonium Phosphate	19	13	9
Uric Acid	6	11	11
Cystine	3	2	1.5

Finally, in larger series of patients with renal stones, approximately 1-3% of the patients will have cystine stones. Cystine stones are radiopaque and precipitate readily in an acid urine. Case #4 is a patient with cystinuria who presented with bilateral radiopaque calculi during adolescence. Nephrolithiasis in childhood or adolescence should prompt a search for an inborn error of metabolism such as cystinuria or hyperoxaluria.

The formation of stones in the urine is dependent on the concentration of crystalloid in the urine and on the physicochemical characteristics of the urine which affect the solubility of the crystalloid. The concentration of crystalloid in the urine is dependent on the volume of urine and the amount of crystalloid excreted. Clinically, the excessive excretion of crystalloids into the urine is the most important factor for initiating a diagnostic search for the cause of a patient's stone disease. Of the various crystalloids, calcium is the most important, being found in up to 90% of all stones. Approximately 60% of the serum calcium is in a form that can be filtered by the kidney, but over 90% of the filtered calcium is reabsorbed; thus, the amount excreted in urine normally is small, less than 250 mg/24 hrs.[14]

Increased calcium excretion can be detected in 30-60% of the patients forming calcium oxalate or calcium phosphate stones.[6,15] The finding of hypercalciuria in a patient with cal-

cium containing stones should prompt a search for a number of underlying disorders (Table 2). In any patient with calcium containing stones, hyperparathyroidism should be ruled out. Fifty percent of all patients with hyperparathyroidism have kidney stones during the course of their disease,[16] though this incidence is likely to fall in the future as multiphasic screening picks up more patients with asymptomatic hyperparathyroidism. Of all patients presenting with calcium containing stones, approximately 5-10% will have hyperparathyroidism.[12] Metastatic cancer and multiple myeloma may cause hypercalcemia and hypercalciuria, but nephrolithiasis is unusual because hypercalciuria is often associated with far advanced, terminal disease. Immobilization may predispose to acute hypercalcemia and hypercalciuria with resultant nephrolithiasis, particularly in adolescents at bed rest for fractures of long bones. Cushing's syndrome and hyperthyroidism have also been associated with hypercalcemia, increased urinary calcium excretion and calcium nephrolithiasis. Renal tubular acidosis (RTA) of the distal or gradient type is a condition in which there is an inability of the distal nephron to maintain a hydrogen ion gradient. The patient is unable to maintain a urine pH of less than 5.5 in the presence of systemic acidosis with a CO_2 combining power of less than 15 meq/L. The acidosis results in the urinary wasting of sodium, potassium, calcium and phosphorus. These patients have resultant muscle weakness due to hypokalemia and osteomalacia, and nephrolithiasis and nephrocalcinosis due to hypercalciuria and hyperphosphaturia. Distal RTA may also occur as a result of treatment of glaucoma with acetazolamide, a carbonic anhydrase inhibitor, which can produce all of the complications of the other acquired or hereditary forms. Hypervitaminosis D and the milk-alkali syndrome have often been associated with hypercalcemia, hypercalciuria, nephrolithiasis, nephrocalcinosis, and renal insufficiency. Both of the syndromes are now uncommon as clinicians have recognized the complications of these drugs. Sarcoidosis may also cause hypercalciuria and hypercalcemia, presumably due to an increased gastrointestinal sensitivity to vitamin D. There is an approximately 14% incidence of calcium stones in patients with sarcoidosis, with the highest incidence of stones in patients having hypercalcemia and hypercalciuria.[17]

TABLE 2

CAUSES OF HYPERCALCIURIA

HYPERPARATHYROIDISM
METASTATIC CANCER
MULTIPLE MYELOMA
IMMOBILIZATION
CUSHING'S SYNDROME
HYPERTHYROIDISM
RENAL TUBULAR ACIDOSIS
MILK-ALKALI SYNDROME
VITAMIN D INTOXICATION
SARCOIDOSIS
IDIOPATHIC HYPERCALCIURIA

Despite rigorous evaluation, approximately 80-90% of patients with calcium stone disease and hypercalciuria will not have a specific etiology. These patients are generally classified as having "idiopathic hypercalciuria". The syndrome of "idiopathic hypercalciuria" was originally described by Fuller Albright in 1953 and was characterized by the formation of calcium oxalate or calcium phosphate kidney stones in middle aged males with normal serum calcium, low or normal serum phosphorus, a urinary calcium excretion in excess of 250 mg/24 hrs., and a negative neck exploration for a parathyroid adenoma.[18]

The pathogenesis of idiopathic hypercalciuria is not entirely clear, but the possibilities include a renal leak of calcium, increased dissolution of bone, or an increased absorption of dietary calcium. Studies by Peacock and Nordin seem to indicate that most patients with hypercalciuria have an increased absorption of dietary calcium.[19] These patients do not have hypercalciuria on a calcium free diet, but as the dietary intake of calcium is increased to about 1000 mgs. a day, hypercalciuria develops. Normal individuals will increase urinary calcium excretion with increased dietary

intake, but patients with idiopathic hyercalciuria have an exaggerated response. So far, increased dissolution of bone has not been demonstrated, nor has a renal calcium leak been found. The mechanism by which increased small intestinal absorption of calcium occurs in patients with idiopathic hypercalciuria remains to be defined.

Oxalate is found in approximately 60% of all stones and increased oxalate excretion may be the cause of a small number of these. Oxalate is a non-reusable end product of glycine, α-ketogluturate, glycolate, and ascorbate metabolism. A number of conditions may be responsible for hyperoxaluria and resultant oxalate nephrolithiasis (Table 3). Rare patients

TABLE 3

Causes of Hyperoxaluria

DIETARY
DRUG OR TOXIN
PYRIDOXINE DEFICIENCY
ILEAL DISEASE
PRIMARY HYPEROXALURIA I & II

have been described who apparently developed oxalate nephrolithiasis from the excessive intake of dietary sources rich in oxalate, such as cabbage, spinach, rhubarb, tea, coffee and cola.[20,21] Certain drugs or toxins may serve as precursors of oxalate, and these substances may lead to oxalate nephrolithiasis. Ethylene glycol, a major component of antifreeze, is a well known cause of acute oxalate nephrolithiasis and renal failure; it is a precursor of glycolate, one of the intermediates leading to oxalate.[20] Methoxyflurane anaesthesia has recently been described as a cause of hyperoxaluria and oxalate stones, and it also is a precursor of oxalate.[22] Pyridoxine deficiency may lead to hyperoxaluria, since it is required for the recycling of glyoxalate, the immediate precursor of oxalate. Deficiency of pyridoxine, therefore, leads to the shunting of glyoxalate directly into oxalate. Recently, it had been noted that there is an increased incidence of oxalate nephrolithiasis in patients with ileal disease or ileal resection. Patients with ileostomies or chronic diarrheas may be persistently dehydrated, a condition which would lead to an increased concentration of crystalloid in the urine with stone formation. Also, these patients seem to have a hyperabsorption of dietary oxalate, which leads to hyperoxaluria and oxalate stones.[23] It is likely that inflammatory bowel disease with involvement of the ileum will be the most common cause of hyperoxaluria. Finally, there are two rare inborn errors of metabolism known as the primary hyperoxalurias which are characteristically associated with calcium oxalate nephrolithiasis. Clinically, both forms of the disease are identical with 65% of the homozygotes showing an onset before age five and 80% succumbing to the disease by age 20.[21] The history of the disease is that of recurrent renal colic, hematuria, and urinary tract infection which leads to chronic renal failure. The course of this disease is not inexorably one of early onset and demise, as rare homozygotes have been described with this disease who had the onset in adult life.

Uric acid is found in approximately 10% of upper tract stones analyzed from the United States. Approximately 75% of these patients with uric acid nephrolithiasis do not have elevated serum or urine uric acid (Table 4).[24] The abnormality in these patients with

TABLE 4

Uric Acid Nephrolithiasis

Idiopathic
Hyperuricosuria with Hyperuricemia
Primary Gout
Myeloproliferative Disorders
Lesch-Nyan, Glycogen Storage Disease
Hyperuricosuria Without Hyperuricemia
Drugs-Probenicid, Asa
Diet
Tubular Defect
Dehydration

"idiopathic uric acid nephrolithiasis" appears to be a failure of the morning and post-prandial "alkaline tides" to occur, the patients having a persistently acid urine of pH less than 5.2.[24] Uric acid is extremely insoluble in acid urine

with only about 20% in the dissociated state at pH 5.2;[24] therefore, it is clear that patients with persistently acid urine should be predisposed to uric acid stones despite a normal urinary excretion of less than 600 mg. uric acid daily. Aside from the patients with persistently acid urine, states leading to hyperuricemia and hyperuricosuria commonly cause uric acid stones. The most common of these states is primary gout. Approximately 25% of uric acid stone formers have gout, and conversely, about 25% of gouty patients have uric acid stones.[24] The pathogenesis of uric acid stones in gout is not simply increased excretion of uric acid, since many patients with primary gout do not have hyperuricosuria. Perhaps those patients with gout and stones who do not have hyperuricosuria have more acid urines.[24] Myeloproliferative syndromes, particularly polycythemia vera and myelofibrosis with myeloid metaplasia, and lymphomas under cytolytic therapy are associated with hyperuricemia, hyperuricosuria and uric acid stones.[24] Rare metabolic disorders such as the Lesch-Nyan syndrome, an inborn error of purine metabolism, and Von Gierke's glycogen storage disease, glucose-6-phosphatase deficiency, characteristically result in hyperuricemia, hyperuricosuria, and an increased incidence of uric acid stones.[24] Uric acid stones may also form in a few conditions in which the serum uric acid is normal, but there is an increased excretion of uric acid in the urine. Patients treated with uricosuric drugs such as probenicid and low dose aspirin are predisposed to uric acid stones. Rare patients have been described who had hyperuricosuria as a result of a massive dietary intake of purines in the form of meat protein.[24] Also, a rare patient has been described who had a renal tubular reabsorptive defect for uric acid, which could cause uric acid stones.[25] Finally, dehydration with persistently low urine volumes may result in uric acid nephrolithiasis in patients with ileostomies or chronic diarrheas; these patients have an increased incidence of both oxalate and uric acid stones.[26]

The fourth most common crystalloid excreted in excess in large series of patients with upper tract stones is cystine, which is a cause of 1-3% of all stones. Cystine stones occur exclusively in cystinuria and are the primary clinical abnormality in patients with this disease. Cystinuria is an autosomal recessive disorder in which there is defective renal tubular reabsorption and gastrointestinal absorption of the amino acids cystine, ornithine, lysine, and arginine.[27] Despite impaired intestinal absorption of these amino acids, increased excretion occurs in the urine since they are derivatives of the absorbable amino acid methionine. The major clinical feature of this disease is recurrent nephrolithiasis which leads to renal failure in the fifth or sixth decade.[27] The disease may show variable penetrance; some patients with cystinuria never form stones while others begin in adult life. The usual patient, however, will have the onset of the disease in childhood. Cystine is relatively insoluble in acid urine, and it may be the urine acidity that is responsible in part for the apparent variable penetrance.

After diagnostic evaluation, about 25-50% of the patients with nephrolithiasis will not have a demonstrably elevated excretion of crystalloid in the urine. In this group of patients the pathogenesis is probably related to the physicochemical environment of the urine. Urine in normal, non-stone forming individuals is generally saturated with calcium, oxalate, and phosphorus; thus, it is clear that normal urine has certain characteristics that prevent stone formation.[28] The role of pH, infection, and stasis are well known in the pathogenesis of magnesium ammonium phosphate stones, but obviously there are other factors that might be important in the pathogenesis of upper tract stones. A number of inhibitors of stone formation have been found in the urine, including magnesium, citrate, pyrophosphate, and certain peptides and mucopolysaccharides.[28] No deficiency of any of these inhibitors has been found to explain the formation of stones in patients without increased crystalloid excretion, but it appears that further investigation of the urine of stone formers will

provide a better understanding of stone pathogenesis.

Dr. Richard E. Katholi: Further perspective of the complications of nephrolithiasis can be gained by reviewing the natural history of this disease. Since calcium containing stones are the most common type, it is appropriate to focus on a series[29] of over five hundred patients with recurrent calcium stones who were followed an average of eighteen years after the initial episode of colic. Over forty per cent of the patients developed another renal calculus within five years, and by eighteen years, seventy per cent of the patients had had a recurrent stone. Thus the formation of a calcium renal calculus is not a solitary episode for most patients but is part of a continuing process with a high incidence of recurrence. A patient with nephrolithiasis also has a considerable chance of surgical intervention at some time during the course of the disease. In this same series,[29] seventy per cent of the patients required a surgical or manipulative procedure during the eighteen year period of study.

In order to prevent repeated hospitalizations and preserve renal function, all patients recognized as renal calculi formers should be evaluated for etiology[30] so that specific prophylactic therapy can be instituted. An etiology should also be sought because a kidney stone is at times the first sign of an underlying systemic disease, such as hyperparathyroidism. Large series[12,31] in the literature report that an etiology can be found in 50-75% of the patients evaluated for nephrolithiasis.

Tests used to evaluate a patient with nephrolithiasis are listed in Table 5. It is important to note that these tests are not difficult to do and do not require a metabolic ward. As previously discussed, the historical and radiographic features of each stone type may provide useful information. The crystallographic composition of the stone should be determined. All urine of a patient with colic should be strained and stones removed at surgery should be retrieved. Patients often save previously passed stones, and these also can be used for analysis.

A proper stone analysis requires the crystallographic techniques of polarization microscopy and x-ray diffraction.[11,32] A qualitative chemical analysis alone, with identification of the various constituents of the stone, is not sufficient. A proper stone analysis includes carefully sawing the calculus in cross-section

TABLE 5

Tests to Evaluate Renal Stone Formers

I. Stone analysis*
II. Urine examinations
  A. pH: check at each voiding for two days
  B. Sediment
  C. Culture and Sensitivity (clean catch)
  D. Quantitative Tests on Urine (add 10 ml concentrated HCl as preservative)
    1. 24 hr urine calcium: on regular diet: Normal = 250 mg/24 hr.
    2. 24 hr urine oxalate: Normal = 10-50 mg/24 hr.
    3. 24 hr urine uric acid: Normal = 300-600 mg/24 hr.
    4. 24 hr urine cystine: Normal = 18 mg/gm creatinine
  E. Renal function: creatinine clearance
III. Blood tests
  A. CBC with differential count, electrolytes, creatinine, protein electrophoresis
  B. Calcium, Phosphorus, uric acid (repeat x 3)
IV. Intravenous pyelogram

* Stones can be sent for this type crystallographic analysis to:
Louis C. Herring and Company
15 West Underwood Avenue
Orlando, Florida 32806

to see if a nucleus is present and to determine the location of other substances. The chemical substances are identified by polarization microscopy and by x-ray diffraction. Polarization microscopy uses the principle that each crystalline structure bends light a specific degree and thus is identifiable. X-raying small samples also gives a characteristic diffraction pattern on photographic plates. After identification, the relative amounts of each substance are quantified. By knowing the amounts of each substance and the distribution in the stone, one may be able to understand the pathogenesis of a patient's stone. For example, if the stone analysis reveals a nucleus of calcium oxalate and outer laminations of magnesium ammonium phosphate, this suggests that a calcium oxalate stone formed first followed by infection from urea splitting organisms. The patient is probably a calcium oxalate stone former. Of course, interpretation is not always that clear.

Once one knows the stone type, one then looks for the various underlying causes of each type as previously outlined. Regardless of the type of stone, all patients should have a urine culture to look for associated infection, a creatinine clearance to define renal function, and an intravenous pyelogram to rule out anatomic defects in the urinary system.

If no calculus can be obtained for analysis because it was passed prior to admission or because it is still in place, defining the specific stone type can be difficult. The screening blood tests and urine chemistries in Table 5 should be done and may provide a clue to diagnosis.

In order to gain helpful information from the urine pH, it should be checked at each voiding for two days to see if a pattern can be defined.[33] A constantly acid urine (Fig. 2)[34] in which the urinary pH rarely exceeds 5.5 is seen in uric acid stone formers. A constantly alkaline urine suggests an infection with urea splitting organisms. A urine with a pH fixed around 6.5 might suggest distal renal tubular acidosis.

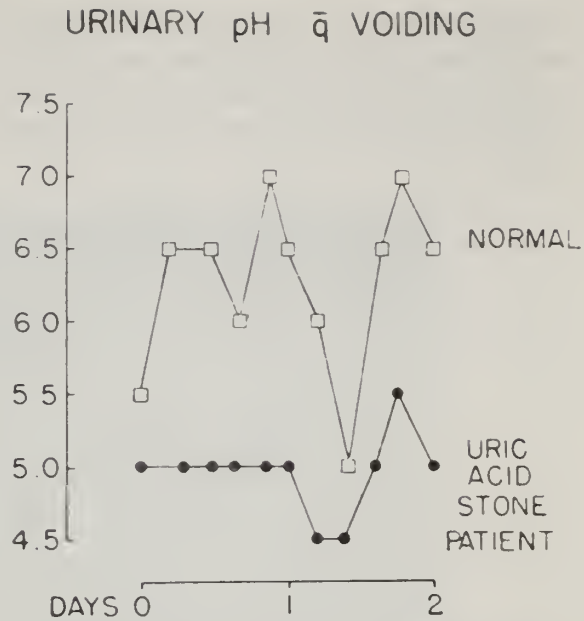


Fig. 2. Chart of urinary pH's showing the characteristic persistently acid urine in a patient with idiopathic uric acid stone contrasted with the urinary pH of a normal patient. (Reprinted by permission of the authors and editor from Medicine 40:315-346, 1961.)

Careful examination of the urinary sediment also is helpful. Besides looking for polymorphonuclear leukocytes and bacteria, one should also look for crystals. Flat hexagonal crystals (Fig. 3)[35] are cystine crystals and are pathognomic for cystinuria. Calcium oxalate, uric acid, and triphosphate crystals are not of the same diagnostic importance because they may be seen in patients without nephrolithiasis. In particular, uric acid and triphosphate crystals can be seen in any person if the urine is respectively acid or alkaline at the time of collection. Thus, these crystals may be a reflection of urine pH rather than an underlying problem. Despite a full evaluation, the exact cause of 25-50% of renal calculi remains undetermined. Nephrolithiasis may be familial and work-up of family members may be warranted. Particularly in cystinuria or primary hyperoxaluria, it is important to identify latent disease in the siblings and initiate preventive therapy.

When planning treatment for nephrolithiasis, remain aware that the problem may extend over a period of years. Thus, the ideal therapeutic regimen must be easy for the patient to

follow, inexpensive, and without significant side effects so that the patient can continue therapy indefinitely. Presently, medical treatment includes decreasing the concentration of urinary crystalloid by hydration, diet, or drugs, making crystalloid more soluble by controlling pH, and treating infections.

Fig. 3. Cystine crystals in urine from a patient with cystinuria. (Reprinted by permission of the author and editor from Hospital Medicine 9:50-64, 1973.)

Regardless of etiology an important principle in treatment of all renal stone formers is the maintenance of adequate hydration, especially during hot weather. Treatment also includes avoiding marked concentration of urine that normally occurs at night. Rather than instructing the patient to drink a certain volume of fluid, the urine specific gravity should be determined at intervals to be certain that adequate hydration is accomplished. The specific gravity should be less than 1.018 at all times, including the first morning specimen. The patient may need to drink fluid at night to maintain a dilute urine. The patient should be instructed to follow his urine specific gravity.[30]

Maintaining maximal solubility of crystalloid by controlling pH of the urine is another important principle of treatment.[36] Figure 4 demonstrates the saturation or solubility of each crystalloid with respect to pH. Note that calcium oxalate solubility is not affected by changes in pH, but magnesium ammonium phosphate is more soluble if the pH is lowered to less than 7.0 by acidification. On the other hand, both uric acid and cystine are less likely to precipitate in an alkaline environment. Thus, a patient with uric acid stones should ideally maintain his urine pH in a range of 6.0-6.5. A patient with cystinuria theoretically should keep a pH of greater than 7.4,

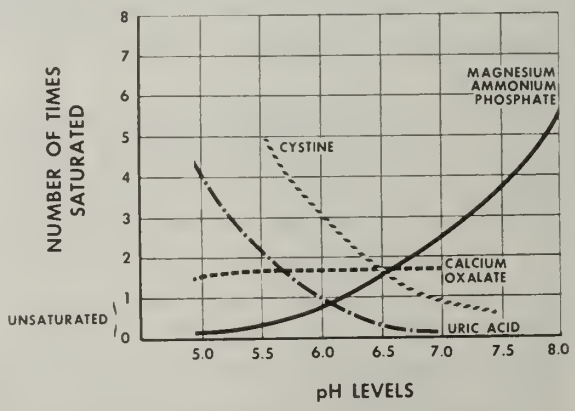


Fig. 4. Saturation of urine with each crystalloid at different pH levels.

but this would predispose him to problems with magnesium ammonium phosphate crystalloid. A safe pH for cystinurics to chronically maintain is 7.0. Again, it is important to teach the patient to use nitrazine paper and monitor urine pH to be certain the proper level is achieved.

Besides hydration and pH manipulation there are other aspects of therapy for each stone type (Table 6). A small group of patients with calcium oxalate stones and hypercalciuria will be found to have a specific underlying disease. In these cases definitive treatment is directed toward the underlying disease such as removing the parathyroid adenoma in a patient with hyperparathyroidism or treating with steroids in a patient with sarcoidosis. However, the majority of patients with calcium oxalate stone and hypercalciuria fall into the previously defined category of "idiopathic hypercalciuria". This group appears to have increased calcium absorption from the small intestine as a major mechanism leading to hypercalciuria[19] but a strict low calcium diet has never been shown to have a significant influence on the course of this disease.[21] A very low calcium diet may actually create problems because severe dietary calcium restriction causes increased oxalate absorption,[37] and small changes in urinary oxalate concentration have more influence on the precipitation of calcium oxalate than larger changes in urinary calcium concentration.[37] Therefore, most authors[22,33] recommend only a moderate decrease of calcium in the diet which is easily attained by restricting milk and milk products such as cheese and ice cream. Keep in mind when instructing patients to force fluids that they avoid beverages containing large amounts of oxalate such as tea, coffee, cola drinks and fruit juices.[21]

If a patient with idiopathic hypercalciuria has active disease with frequent recurrences of stones, a trial of drug therapy is indicated.

TABLE 6

TREATMENT OF RENAL STONE FORMERS

Calcium Oxalate (Idiopathic Hypercalciuria)

1. Hydration
2. Diet: Avoid milk and milk products
3. Hydrochlorothiazide 50 mg twice daily by mouth

Magnesium Ammonium Phosphate

1. Hydration
2. Acidify urine to pH less than 7.0 (ammonium chloride 1-3 mg four times daily by mouth with meals*)
3. Treat infection based on urine culture and sensitivity
4. Correct anatomic defect

Uric Acid

1. Hydration
2. Alkalinize urine to pH 6.0-6.5 (1-2 gm sodium bicarbonate four times daily by mouth**)
3. Allopurinol 200-400 mg daily by mouth in divided doses

Cystine

1. Hydration
2. Alkalinize urine to pH 7.0 (1-3 gm sodium bicarbonate four times daily by mouth**)
3. D-penicillamine hydrochloride 1-4 gm daily by mouth in four equally divided doses

* Ammonium chloride is given with meals to reduce gastric irritation. It should not be given in the presence of severe renal or hepatic disease or marked respiratory acidosis.

**Sodium bicarbonate should not be given in the presence of severe renal, cardiac or hepatic disease.

Many treatments have been tried in the past with some success, including methylene blue,[38] phytate,[39] and orthophosphate.[40] The chronic, intermittent nature of renal calculi formation makes evaluation of various modes of therapy most difficult, and no controlled studies to evaluate these therapies have been done. If a patient has frequent recurrences of stones we recommend hydrochlorothiazide, 50 mg. orally twice daily. This has been reported to be successful with few side effects in a large but uncontrolled series.[31] The major mechanism appears to be the result of depletion of extracellular fluid volume as a consequence of diuretic induced sodium losses. This leads to increased calcium resorption in the proximal tubule of the nephron with resultant decreased urinary calcium excretion.[41] A promising drug for the future, recently reported in a small series, is cellulose phosphate.[42] This non-absorbable resin when taken orally binds calcium in the small intestine preventing calcium absorption and leads to a decreased urinary calcium excretion. Therapy of patients with oxalate stones without hypercalciuria is confined to hydration and treatment of symptoms and infection.

Eradication of infection in patients with magnesium ammonium phosphate stones is the therapy of choice but is difficult.[43] Antibiotic therapy after culture and sensitivity testing, acidification by ammonium chloride of the urine to a pH less than 7.0, and correction of anatomic defects, when possible, are the modes of treatment.

A low purine diet is not useful in the treatment of patients with uric acid stones.[33] If hydration and alkalinization of the urine with sodium bicarbonate to a pH of 6.0 to 6.5 do not control the problem, allopurinol is indicated. Allopurinol is a xanthine oxidase inhibitor which blocks the formation of uric acid resulting in decreased serum and urinary levels of uric acid and increased urinary levels of xanthine. Xanthine is more soluble than uric acid and only rarely have xanthine stones been described as a complication of this therapy. Xanthine stones also respond to hydration and alkalinization of the urine.[44]

Dietary restriction of methionine does not play a major role in therapy of patients with cystine stones.[45] Adjustments of the urinary pH by sodium bicarbonate to a level of 7.0 provides some benefit. A major advance in the treatment of cystinuria is the development of D-penicillamine hydrochloride[46] which forms a mixed disulfide of penicillamine and cysteine. This disulfide is much more soluble in urine than cystine. Dermatitis, nephrotic syndrome, bone marrow depression, and pyridoxine deficiency have been described as side effects of D-penicillamine. New, less toxic penicillamine analogues, such as N-acetyl-D penicillamine,[47] are being developed.

The specifics of surgical management will not be discussed, but in essence urologic manipulation or surgery is used to relieve obstruction and thereby prevent loss of renal function. A final important aspect in treatment of all patients with nephrolithiasis is follow-up evaluation to assure that the therapeutic measures are effective. Follow-up should include periodic measurement not only of urinary specific gravity and urinary pH but also evaluation of urinary calcium, oxalate, uric acid or cystine depending on the respective stone type and therapies to assure that the excretion of crystalloid is controlled.

Dr. John Owen: It is important to realize that now that we have the ability to measure parathormone levels and urinary cyclic adenosine monophosphate (cyclic AMP) we are finding that some of the patients with "idiopathic hypercalciuria" actually have hyperparathyroidism. We have had such patients here which were verified by operation.

Dr. Kiraly: It is important to point out that "idiopathic hypercalciuria" is a syndrome which in the last analysis will probably have several etiologies. The concept of normocalcemic hyperparathyroidism has recently been clouded by a study[48] which suggested that some of these patients have secondary hyperparathyroidism due to a renal tubular leak of calcium.

Dr. Hook: You have mentioned the medical management of stone forming patients. Will you comment on the criteria used for selecting patients for surgical manipulation?

Dr. Katholi: The aim of surgery is the preservation of renal function by relieving otherwise irreversible obstruction or persistent infection. Usually, one can determine the need for surgery by the size of the stone. A stone of less than 5 mm. will generally pass the ureter spontaneously without causing obstruction. Stones larger than 8 mm. will generally not pass spontaneously, and these should be removed surgically. For stones between 5 mm. and 8 mm. in size, an intermediate approach is recommended in which the patient may be followed closely for up to two weeks before surgical intervention is necessary. If infection or renal insufficiency supervenes during this two weeks, the stone should be removed immediately.

Dr. Keith Sherlock: A very subtle form of ileal disease, leading to hyperoxaluria and oxalate nephrolithiasis, is ileal disease secondary to pelvic radiation in renal transplant patients. Since these patients do not have overt symptoms of ileal disease, one must keep in mind this complication in this group of patients.

Dr. Hook: You presented a fairly optimistic attitude about the use of thiazides in "idiopathic hypercalciuria"; you've shown me articles which reinforce that attitude. But my understanding is that enthusiasm for thiazides is not uniform among all groups.

Dr. Katholi: One of the reasons that there is not uniform enthusiasm is that although one can decrease 24 hr. urinary calcium excretion, it does not necessary prevent recurrent calcium stone disease. The problem is that there are multiple mechanisms in the formation of each type of stone and that thiazides only attack one of them. The other problem is that with no controlled studies, each group in the literature tends to favor the compound they have studied.

Dr. Hook: Dr. John Eager Howard, has talked about "evil" urine and "kind" urine in stone formers. What is the present status of this concept?

Dr. Kiraly: The studies by Dr. Howard were performed using a model of recalcification of rachitic rat cartilage.[28] He found that urine from calcium stone formers recalcified the cartilage and normal urine did not. This led to the speculation that there may be a deficiency of an inhibitor substance in the urine of stone formers which leads to stone formation. So far, no such deficiency has been found and the significance of these studies remains unclear.

References may be obtained from Dr. Katholi, Box 121, University Hospital, Charlottesville 22901

New Schedule Describes Seriousness of Heart Attack

So you've had a heart attack. How bad was it? What are your chances?

Your doctor now has a new table of classifications to determine how sick you really are.

In the new schedule of the American Heart Association there are four degrees of heart attacks: Uncompromised (prognosis good); Slightly compromised (prognosis good with therapy); Moderately compromised (prognosis fair with therapy), and Severely compromised (prognosis guarded despite therapy).

Your doctor will arrive at your classification on the basis of tests and observation. The classification will help both of you to know where you stand.

The new classifications are listed in an editorial in the July 15 issue of the *Journal of the American Medical Association.*

Public Health....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Nosocomial Infection Surveillance and Control in Virginia

The cost of medical care in the United States is rapidly approaching $100 billion per year. Recent studies indicate that approximately 5-10 percent of hospital beds are filled at any given time with patients who have developed nosocomial (hospital-acquired) infections. Several court decisions have also supported the concept of legal responsibility by hospitals for the prevention and control of such infections.[1]

We are also moving into an era of increasing concern for quality control in medicine and an era wherein the Federal government will be paying the bill for an increased percentage of medical care. Any problem which costs billions of dollars per year and is largely preventable is certain to come under intensive scrutiny. Hospitals which do not take steps on their own to develop functional nosocomial infection surveillance and control systems may eventually have these measures imposed upon them.

In the Commonwealth several significant developments relate to nosocomial infections and deserve comment:

1. The proposed rules and regulations for the licensure of hospitals require all hospitals to meet more comprehensive communicable disease control requirements, including surveillance and reporting of infections to the local health department. It is expected that infection control nurses and physicians will carry out the major portion of these new responsibilities under the direction and authority of infection control committees.
2. A recent survey by the Bureau of Epidemiology, Virginia State Department of Health, revealed that of the 112 licensed general hospitals in the Commonwealth there are only one full time medical epidemiologist and eleven full time epidemiologists. Fifty-two hospitals have a *part-time* physician, nurse, or bacteriologist assigned to infection control. Many of these positions are currently vacant because hospital personnel trained in infection control are in short supply.
3. Over the past two years the University of Virginia Medical Center Hospital has developed a complete, integrated, prevalence-type surveillance system. The University also developed an excellent training course in nosocomial infection surveillance techniques and the principles of hospital infection control.

The Bureau of Epidemiology, Virginia State Department of Health, has just been awarded a three-year $150,000 contract from the Center for Disease Control to develop a statewide Nosocomial Infection Surveillance System. The contract will be carried out in cooperation with the University of Virginia Medical Center. The objectives and methods of the project should be of interest to all physicians practicing in the Commonwealth.

Objectives

1. To provide designated individuals from each of Virginia's hospitals and health districts with 2-4 weeks of training in the epidemiology of nosocomial infections.
2. To provide one week of training in the clinical microbiology of nosocomial infections to participating hospital-laboratory

[1] MedicoLegal Bulletin #251, March 1974, published by the Office of the Chief Medical Examiner, Commonwealth of Virginia, Department of Health.

microbiologists and consultative laboratories.

3. To provide periodic site visits to participating hospitals during which reinforcement of teaching and evaluations will take place. At least one on-site evaluation will be performed at each participating hospital. In order to assess efficiency of surveillance and control, complete surveillance surveys will also be carried out at selected hospitals during the three years.

4. To establish a statewide reporting system for nosocomial infections. Reports will be channeled through the local health department to the Bureau of Epidemiology, Virginia State Department of Health, for continuing assessment and feedback.

5. To upgrade the present system for the reporting, investigation, and control of communicable disease acquired in the community and diagnosed and managed in the hospital.

6. To provide epidemiologic consultation and assistance to community hospitals and health departments experiencing outbreaks or increased incidence of hospital infections.

Methods and Activities

The training in the epidemiology of nosocomial infections will be conducted at the University of Virginia Hospital. The training course will be divided into four phases.

Course A: A 2-week basic course designed to train individuals with little or no previous experience in the basic principles of epidemiology or nosocomial infections. Students will be taught the nosocomial infection surveillance and control system developed at the University of Virginia, but will become familiar with alternative methods which are suitable for community hospitals. They will also be instructed in prevalence surveys, control measures, and disease reporting requirements and briefed on the disease control activities of the Virginia State Department of Health.

Course B: A 1-week course designed for individuals who have completed the first course, or who are experienced in nosocomial infection surveillance and control. This course will concentrate on improving existing surveillance systems, the presentation of surveillance data, and the initiation of reporting systems for community-acquired infection diagnosed in the hospital. Investigation and control measures will be emphasized.

Course C: The final week-long session will be devoted to more sophisticated epidemiology, in a workshop format. This course will be problem-oriented and will stress continuing evaluation and efficiency of surveillance, and further control measures will be developed.

The fourth phase of the program will be the evaluation phase. A site visit will be made to each participating hospital by one or more (usually two) members of the project staff. Intensive on-site evaluation of surveillance system and control methods at each hospital will be combined with follow-up training for the infection control epidemiologist.

The training program will be offered to individuals (usually nurses) designated by their hospitals. Attempts will be made to train at least one individual from every general hospital regardless of size. Since a number of Virginia hospitals are actively seeking nurse infection control officers, trainees who are not currently employed by hospitals may be accepted.

The second major group of trainees will be drawn from health districts in Virginia. These individuals, designated by their local health director, will be trained in order to provide local health department consultation to small hospitals and to assist in the development of surveillance, investigation, and control in institutions unable to have their own infection control nurse. These individuals will also provide a local liaison for the development of the statewide surveillance system and will assist

(*Continued on page* 744)

Mental Health . . . .

Preventive Maintenance for Mentally Ill Patients

GREER JACKSON, B.S.

The advent of psychotropic drugs nearly twenty years ago made it possible to release patients from State mental hospitals for community living. However the requirement that they have "aftercare" support, particularly medication, soon became very important.

In 1959 Virginia was one of five states to participate in a controlled study of aftercare. The study, in which Colorado, Kentucky, Michigan, and Pennsylvania also participated, showed that the relapse rate could be sharply reduced by an aftercare program. The Virginia State Legislature realized the program's benefits for both the patients and the state taxpayers, and it appropriated funds in July 1966 to help the department of mental hygiene implement such a program.

In 1968 the then department of mental hygiene and hospitals (now the Department of Mental Health and Mental Retardation) reviewed the program and added an aftercare pharmacy, located in the department's central office in Richmond. The pharmacy staff, one pharmacist and one clerk-typist, took care of necessary medications for released patients.

It was decided that it was needed not only to supply the patients with medication, but also to keep them under routine supervision. This is particularly important for those who are not taking part in other aftercare activities. Therefore when the patient is released, the hospital sends his records to an aftercare or mental hygiene clinic near his home. If the patient does not live close to one of those clinics, his records are sent to the nearest health department clinic. At the time of release from the hospital, the releasing physician prescribes medication for the patient to be supplied by the hospital pharmacy. Only enough medication is given to last the patient until he can be seen by a clinic. At the same time, the physician sends a prescription to the aftercare pharmacy for a thirty day supply, to be mailed to the clinic or health department where the patient will be assigned for continued treatment and evaluation. At this point the clinic or health department assumes responsibility for the patient.

It is advantageous for the retail pharmacists to be involved, for many reasons, and third party payment prescriptions for the most part are referred to the retailer. This is important, for it keeps other members of the health care team involved and interested in the overall problems of mental health. Patients who are able to pay full price on the retail market are also instructed to follow this procedure.

The patient and his family are contacted to set up an appointment at the clinic, where the patient is assigned to a physician for medication supervision. Before prescribing, the physician reviews the patient's hospital record for pertinent information such as the maintenance medication he received upon release and his prognosis.

The clinic forwards the prescription to the aftercare pharmacy, where it is filled and returned to the clinic physician. The physician may order the medication in a 30-, 60-, or 90-day supply, but the pharmacists fill the prescriptions in 30-day units.

The patient must come to the clinic every month to get his supply of medication. Thus inventory control and accountability is established, and it is insured that the patient is evaluated every 30 days. Periodic evaluation is

JACKSON, GREER, B.S., *chief pharmacist for aftercare pharmacy, Department of Mental Health and Mental Retardation.*

Approved for publication by the Commissioner, Department of Mental Health and Mental Retardation.

important, since his dosage may need to be adjusted. In fact, an attempt is made to reduce the dosage to the minimal level that keeps the patient functioning. Another advantage of monthly visits is that the patient has the opportunity to develop rapport with trained treatment personnel.

When the patient's condition stabilizes, the patient may have to come to the clinic only every 60 or 90 days. The family is carefully instructed to watch for any changes in the patient's behavior pattern, and if changes occur, monthly visits may need to be resumed.

The current method of handling prescriptions has contributed to the success of the aftercare program. Other methods of distributing drugs have been tried but they have not been successful. A large percentage of the patients are indigent and cannot afford to have a written prescription filled at an outside source. Therefore, often they did not get prescribed medication and frequently they had to be rehospitalized. Under the state appropriations act of 1968 indigent patients can receive prescribed medication at no cost. It is, of course, far less expensive to maintain a patient in the aftercare program than in the institution.

The aftercare pharmacy now has two full-time pharmacists, two pharmacy assistants, and three clerk-typists. After several refinements it is running smoothly, although occasionally a shortage of funds, personnel, and space to operate our rapidly expanding program is experienced.

In addition to supplying medication, it is the responsibility of the aftercare pharmacy through personal visits and memorandums, to keep all clinics aware of changes in state and federal drug laws and to advise them about drug storage, security, and inventory control. The clinics are informed of any changes in procedures for obtaining third-party payments, which finances a small portion of the drug program.

The aftercare program served only 3100 patients in 1968 and is currently serving the needs of 9600 patients. It is important to emphasize that these people are indigent or medically indigent in most cases and are supplied their medication by the department due to the foresight of the legislature. Controlled studies have shown that only 16 per cent of the patients in the aftercare group had to be rehospitalized as compared with more than 43 per cent in the control group.

The department, since the increased use of the lithiums salts, has been conducting a pilot study that includes all released patients who are taking this drug. This is an important phase of such a treatment program because the toxic dose and the therapeutic dose are very close. It is felt that a monitoring of all patients is of extreme importance.

The prescription is filled by the pharmacy and sent to the facility responsible for the patient's care. All the necessary paraphernalia is supplied the clinic, along with detailed instructions for use in collecting and mailing blood samples for lithium determinations.

After the phlebotomy is performed by the nurses at the local community facility and the collection procedure is complete, the blood sample is sent to the laboratory at Eastern State Hospital. This laboratory does the determinations for all outpatients in the State.

Until such a system was arranged, it was virtually impossible for indigent patients to be released on lithium, because of the costs of such determinations at local laboratories and hospitals to the patients. The determinations made possible by the department are furnished the patient free of charge.

"Crisis Intervention" programs are now being established in some areas. It is the hope that this program will serve as a screening device and that we may be able to treat some patients within the community. A team is assigned to this function exclusively in some areas, and in its infancy in other areas, it is an extended function of the mental health team already involved in patient care. Interviews are conducted with the patient and the patient's family. Psychiatrists, psychologists, and social workers all enter the picture in their respective roles in patient care. Medication may

be given the patient to aid in his overall treatment. This is done on a continued basis, and in many cases is quite successful. The patient may be taken in as an inpatient where there are inpatient bed facilities, or may be treated on an outpatient basis with periodic visits to the clinic for treatment and evaluation. In any event, an effort is made to treat mildly disturbed persons at the community level, thus preventing the increased costs of being hospitalized in one of our mental institutions.

There are now 39 Aftercare Clinics and Comprehensive Mental Health Centers, and approximately 160 health departments and satellites in Virginia. The Aftercare Clinics are completely funded by the state, and the Comprehensive Mental Health Centers are funded by state and local resources, generally on a fifty-fifty basis. The cooperation of the Health Department and its teams has contributed greatly to the efficient functioning of the program.

PUBLIC HEALTH—Nosocomial Infection Surveillance and Control in Virginia

(*Continued from page* 741)

the local health director when local hospitals report problems.

Effective hospital epidemiology cannot be carried out in the absence of high quality microbiological laboratory support. Each participating hospital therefore will have the opportunity to send a hospital microbiologist to a one-week intensive course in the clinical microbiology of nosocomial infections. This course will be developed and presented cooperatively by the Center for Disease Control Training Program and the Bureau of Microbiological Laboratories, Division of Consolidated Laboratories in Richmond.

The complete cost of the training program will be borne by the Bureau of Epidemiology. Hospitals will be asked to pay for the travel and living expenses for their employees for the duration of the courses.

Virginia is the first state funded under this contract and we are most encouraged by the thought that the Commonwealth has been chosen as the demonstration site. The contract provides us with the opportunity to lead the way in the control of a most expensive and serious communicable disease problem in the United States today.

Synthroid®

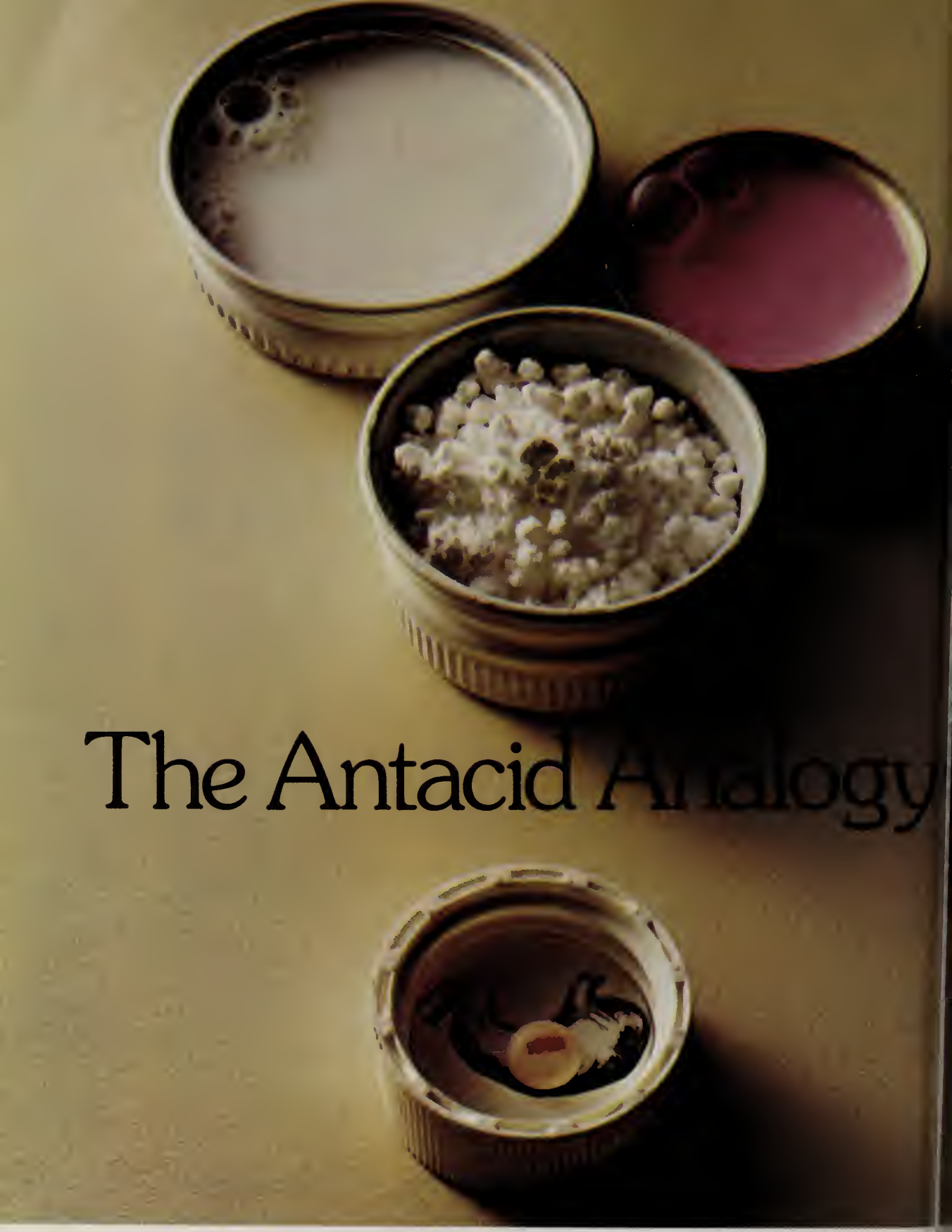
(sodium levothyroxine)

Supplied: **Tablets:** 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded in bottles of 100, 500, and 1000.

Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, U.S.P., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent.

Synthroid-T_4

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC
Deerfield, Illinois 60015



Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with loss of voluntary muscle control. For such patients prompt and continuing artificial res should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, possibility should be considered before administering Pro-Banthi

Precautions: Since varying degrees of urinary hesitancy may be ev by elderly males with prostatic hypertrophy, such patients sh advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with u colitis.

Adverse Reactions: Varying degrees of drying of salivary secreti

Therapeutic comparisons in peptic ulcer.

tacids have only one mode of action to relieve ulcer pain...

Pro-Banthine® has four.

d of
opantheline bromide

tacids:
cids relieve ulcer pain by neutralizing gastric
This action is relatively short-lived and they have
ther mode of action.

-Banthine:

*Banthine suppresses gastric acid
etion.* The antisecretory properties of
Banthine are well established. By effectively
ing vagotonic impulses Pro-Banthine suppresses
c secretion to reduce both total and free acid.

Banthine helps relieve pain.
Banthine relieves ulcer pain by reducing gastric
tion and the motility and spasm of the
intestinal tract.

Pro-Banthine reduces acidity without subsequent acid rebound. The capacity of Pro-Banthine to reduce the secretion of total and free acid in the stomach has been demonstrated in scores of studies. None has demonstrated any significant evidence of acid rebound.

Pro-Banthine activity lasts about six hours. The effect of a single therapeutic dose (15 mg.) of Pro-Banthine lasts about six hours.* Pro-Banthine P.A.®, the prolonged-acting form, is active from 8 to 12 hours. Thus Pro-Banthine may be used to suppress acid, spasm, and pain around the clock, even during the sleeping hours when antacids, to be effective, must be taken almost hourly.

*Innes, I. R., and Nickerson, M., in Goodman, L. S., and Gilman, A. (editors): The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970, p. 537.

Pro-Banthine complements and enhances the action of antacids.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680

s well as mydriasis and blurred vision. In addition the following
reactions have been reported: nervousness, drowsiness, dizziness,
ia, headache, loss of the sense of taste, nausea, vomiting, constipa-
potence and allergic dermatitis.

and Administration: The recommended daily dosage for adult
rapy is one 15-mg. tablet with meals and two at bedtime. Subse-
djustment to the patient's requirements and tolerance must be

nthine P.A.—Each tablet of Pro-Banthine P.A. (propantheline
e) contains 30 mg. of the drug in the form of sustained-release or timed-release beads; on ingestion about half of the drug is released within an hour and the remainder continuously as earlier increments are metabolized. Thus the result is even, high-level anticholinergic activity maintained all day and all night in most patients with only two tablets daily. Some patients may require one tablet every eight hours.

The contraindications and precautions applicable to Pro-Banthine 15 mg. should be observed.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

The Role of the Detail Man

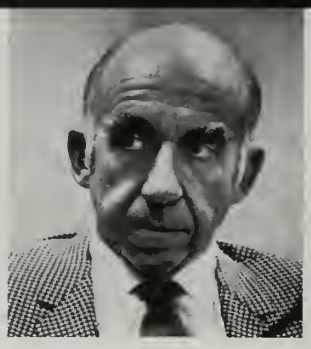
Opinion & Dialogue

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I a very much in favor of the detail m I meet. Most of them are knowled able about the drugs they promot and can be a great help in acquai ing me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most the men who visit me regularly ar they in turn have become aware my particular interests and the n ture of my practice. They, therefore, limit their discussion as mu as possible to the areas of intere to me. Since I usually see the sar representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dea with health problems in this cou there is a potential for detail me to play a meaningful role."

The Positive Influence

My contact with represent tives and salesmen of the pharm ceutical industry is the type of c tact that people in a medical ce research people, and academic people have and that's in all like on a somewhat different level fr that of the practicing physician

Let me touch on how I per ally perceive the role of the sale representative. These men rea large numbers of health profes sionals. Thus they could be—a at times actually are—dissemi tors of useful information. The could consistently serve a real cational function in their abilit discuss their products.

At present they do distrib printed material, brochures ar pamphlets—some of it scienti ally sound and therefore truly ful—as well as some excellent produced by the pharmaceuti industry. When they function i

a Source of Information?

Yes, with certain reservations. verage sales representative great fund of information t the drug products he is re- sible for. He is usually able to er most questions fully and igently. He can also supply nts of articles that contain a deal of information. Here, exercise some caution. I usu- ccept most of the statements pinions that I find in the s and studies which come the larger teaching facilities. s without saying that a physi- hould also rely on other es for his information on macology.

ng of Sales Representatives

deally, a candidate for the on as a sales representative harmaceutical company d be a graduate pharmacist as a questioning mind. I don't his is possible in every case, it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

ity they are indeed useful; ularly in the fact that they ninate broadly based educa- material and serve not just shers" of their drugs.

her Side of the Coin

bviously, the pharmaceuti- panies are not producing all terial as a labor of love— e in the business of selling ts for profit. In this regard bitious and improperly moti- ales representative can negative influence on the ing physician, both by pre- a one-sided picture of his t, and by encouraging the oner to depend too heavily s for his total therapy. In ays, the salesman has often ed objective reality and hined his potential role as an or.

ustry Responsibility

nce the detail man must be mation resource as well as sentative of his particular aceutical company, he be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

Virginia Regional Medical Program . . . .

The Family Nurse Practitioner in Virginia

EUGENE REYES PEREZ, M.D.
Richmond, Virginia
ROBERT A. REID, M.D.
Charlottesville, Virginia

One of us (ERP) visited Estancia, New Mexico, four years ago and saw the concept of the nurse practitioner as a partial solution to the maldistribution of medical care in rural areas of Virginia. A cooperative effort by the Virginia Regional Medical Program and the Department of Internal Medicine at the University of Virginia School of Medicine has resulted in the development of the first permanent program of training for family nurse practitioners in the State.

Estancia is a town of about 800 people, located 50 miles southeast of Albuquerque. It has a small modern clinic, but hasn't had a doctor since 1967. The medical needs of the townspeople and 6,000 others in the surrounding county are cared for by a family nurse practitioner, who maintains constant communication with doctors at the nearby University of New Mexico.

The nurse practitioner was hired when it became apparent that a full-time physician could not be provided to serve the area. She was an experienced registered nurse who was taken from the community, trained further at the University to expand her role, and then approved to manage the clinic by a local committee in cooperation with the University of New Mexico Medical School. Assisted by a staff consisting of a secretary and a laboratory technician, she sees approximately 18 patients a day, does complete histories and physicals, makes preliminary diagnoses, transfers electrocardiograms to the University by telephone hookup, and sends questionable x-rays by bus each day to Albuquerque.[1]

Background

In Virginia, as elsewhere in the nation, there has been a steady decline of practicing physicians who render primary care. This deficit is most notable in rural, isolated and poverty areas. A 1972 study by Dr. Fitzhugh Mayo[2] shows not only a physician distribution problem, but also that, while the population has boomed, many general practitioners are dying off and not being replaced.

The use of nurse practitioners in health care delivery has developed around the country largely in response to immediate needs for service, as in OEO Health Centers, medical centers or group practices needing additional help in providing continuing health care. In certain rural areas where there is no regular physician to serve some communities, it has become necessary to rely on the expertise of a nurse practitioner, who keeps in touch with a supervising physician.

By definition, a family nurse practitioner is a registered nurse who has successfully completed a formal training program preparing her to assume an expanded role in the provision of primary family health services. The formal training program need not be a degree program and several have been developed. A one-year program is offered at the Frontier

Eugene Reyes Perez, M.D., *Assistant Professor of Medical Education, Medical College of Virginia, and Director, Virginia Regional Medical Program.*

Robert A. Reid, M.D., *Assistant Professor of Internal Medicine and Head of Division of Ambulatory Medicine, University of Virginia.*

School of Family Nursing in Kentucky, a five-month program is offered at the University of Virginia, and a program is planned at the Medical College of Virginia. A certificate is awarded at the end of training and the nurse practitioner is licensed by the state.

One of us (ERP) presented the concept to the Council of The Medical Society of Virginia in the fall of 1970. The Council gave its approval for VRMP to explore the idea further with the proviso that this activity be confined to areas where there was a definite need for nurse practitioners—areas where it was not possible, after repeated efforts, to obtain a physician.

The VRMP staff began meeting with community representatives all over the State to see how practical the health care role would be in meeting their community needs and how receptive they were to the idea. Several communities expressed interest in a program to train nurse practitioners. Dr. Robert L. Cassidy, now Director of the Department of Family Practice at the Eastern Virginia Medical School, was president of the Virginia Academy of Family Physicians at that time and was instrumental in locating physicians who had interest in working with such an associate.

An individual who showed particular interest was a doctor who had just started a practice in the community of Konnarock in the rural mountain region of Southwest Virginia. The clinic is 30 miles from three community hospitals, and patients come from as far away as 35 miles. One-fourth of the area's population is on the Medicaid program and the surrounding communities make up a Federally-designated poverty area. The physician, Dr. Janice Gable, was looking for an associate to reach outpatients away from the office and to develop programs in community health concerns in which she herself could not find the time to become involved.

The VRMP staff also observed a model situation on Tangier Island that was similar to the arrangement in Estancia. There, a board of directors manages the clinic, where primary care is given by a family nurse practitioner trained from the area.

After studying the situation in the State's rural areas, VRMP began corresponding with Dr. Regina McCormack, then Associate Professor of Internal Medicine at the University of Virginia, who had developed a program for training nurse practitioners in adult care. Dr. McCormack subsequently left the School of Medicine to enter private practice and was replaced by Dr. Reid (RAR) as Director of the Nurse Practitioner Training Program.

In 1973, the staff of the Virginia Regional Medical Program worked with the University of Virginia to recruit candidates for the course from rural communities, determine ways of supporting the nurse during that training, and locate physicians to serve as preceptors for the graduates. The adult emphasis was expanded to include prenatal and child care. An intensive five-month training program—offered through the Division of Family Practice in cooperation with the Department of Obstetrics and Gynecology, Department of Pediatrics and the School of Nursing—got underway with its first class in the fall of 1973.

The Curriculum

In designing the Nurse Practitioner Curriculum, the University of Virginia School of Medicine saw the nurse as an invaluable partner to the physician who is overextended in his practice. When recruitment of another physician is difficult, an alternative would be to expand the nurse's role in the office. This idea is not new. Many physicians on their own have given office personnel extensive clinical training and responsibility in practice.[3] Teaching progressively sophisticated clinical skills places an unreasonable burden on the physician in practice, however, and there is no formal recognition of these efforts and therefore little opportunity for the nurse to continue to use her skills once she leaves that job. The University's effort, then, is to supplement and recognize this.

The Department currently offers a heavily practical curriculum with an emphasis on

clinical experience. The goal is to produce a comprehensive training program while limiting the financial burden of attending the course as much as possible. This is necessary because the best candidates for the program are often the ones who can least afford to attend class in Charlottesville. Such a nurse frequently plays a key role in the office where she works. She has family obligations, expenses, and community activities which must continue while she is away from home.

The focus of the course is narrowed to concentrate on the three areas which are most important to the student: learning new clinical skills, developing a greater understanding of the pathophysiology of disease, and developing new habits of reading and self-education.

Each candidate to the course is an experienced registered nurse with at least two years of clinical experience. Most have had many more. Ages vary—from 21 to 44—but most are in their late twenties or early thirties. Each nurse that enters the course brings with her certain strengths. She has a wide practical knowledge of medicine, she is familiar with the language, she is acquainted with disease, and she is experienced in monitoring and teaching patients. These assets are the product of their nursing background.

The candidate for nurse practitioner also brings to the course certain characteristic weaknesses which are emphasized in the curriculum: she has no expertise in systematic medical histories or in physical diagnosis; she is weak in anatomy, pathophysiology and pharmacology.

The course of instruction is divided into two parts, each independent of the other. A high score during the first segment is a prerequisite to enter the second. Part I is intensive classroom instruction aimed at developing skills in patient observation. This month of training includes a review of growth and development, anatomy, and physiology. Didactic instruction is supplemented by bedside experience in history-taking, physical diagnosis, and practice in using the problem-oriented record. Part II is a four-month period of extensive supervised clinical experience, with added didactic instruction in the pathophysiology of disease and clinical pharmacology. After the five-month course, a graduate must be employed for a six-month period by a physician preceptor before she can receive certification. It is at this point that the family physician plays a key role in the training of the family nurse practitioner. The nurse has received some basic skills and concepts which must now be adapted to the reality of patient care.

Legal Status

Legally, the concept of nurse practitioner has been given considerable leeway for development. Legislation passed by the 1973 Virginia State Legislature directed the Virginia Board of Medical Examiners and the Virginia State Board of Nursing to promulgate and implement rules and regulations governing the rendering of medical or health services by nurse practitioners under the supervision of licensed physicians. The regulations have been subject to a public hearing and, after a meeting of the joint boards in the spring, were cleared to be put into statutory form.

The draft for the proposed regulations governing the certification of nurse practitioners in the state defines the role as "a registered nurse . . . licensed in Virginia, who has been certified by the State Boards of Medicine and Nursing to deliver primary health care in a particular clinical specialty in collaboration with and under the direction of a licensed physician".[4] The regulations establish four categories of nurse practitioners: adult nurse practice, family nurse practice, pediatric nurse practice, and anesthetic nurse practice.

Activities which constitute the practice of medicine authorized for the nurse include the following: "collecting medical histories and physical data; organizing and reporting data to enable the physician to take appropriate action; pursuing positive findings and making a preliminary diagnosis; performing diagnostic procedures upon the specific or general instruction or direction of the physician; pre-

paring recommendation of final diagnosis and/or treatment plan to the physician; implementing a treatment plan under direction of the physician; and, initiating emergency treatment according to established protocols when the physician is not available."

Potential Uses

It is the concept of the University of Virginia Family Nurse Practitioner Training Program that its graduates will be of most value in four areas: (1) triage of medical, surgical and pediatric problems; (2) monitoring growth and development in normal children and providing preventive care; (3) cooperating with a physician to monitor the progress of pregnancy and provide counseling in family planning; and, (4) managing, in concert with a physician, chronic disease in the adult.

Dr. Cassidy, who left a practice in Culpeper to head the Department of Family Practice at the Eastern Virginia Medical School, doesn't see the major role of nurse practitioners as functioning alone in isolated communities. He advocates the office role of the nurse practitioner working on a one-to-one basis with the family physician as a necessity for "a better level of medical care." He maintains—"You can't do everything. If I have to do all routine physical exams on well people, this time is taken from my main work—and that is sick people. This way, a physician is left free to do care where his expertise is needed." He suggests that if nurse practitioners are accepted as extenders of care, a physician might be able to increase his patient load by 25 percent, with no adverse effects on his practice.

Dr. Rupert W. Quaintance, Jr., a Culpeper physician, has found having a nurse practitioner to be an invaluable asset in handling an average load of 35 patients a day. Dr. Quaintance was not well acquainted with the nurse practitioner concept when Mrs. Vivian Sherwood, a graduate of the University of Virginia Family Nurse Practitioner course, approached him for a position. Although not fully convinced that this was what he wanted, he decided to give her the chance. Within the period of a couple of months, it was evident he was going to be satisfied.

Mrs. Sherwood, who took the course because she wanted to get away from the institutional setting and more into ambulatory care, has been at the office for a year and a half. She does a number of histories and physical examinations, making preliminary judgments on each case before the doctor sees them. Dr. Quaintance is now interested in having her expand her responsibility to include followup of patients.

One of the reasons the doctor had been hesitant about taking on a family nurse practitioner in the beginning was that he feared it would make extra work for the staff. Quite the opposite has been true. Aside from taking over helpful technical chores, Mrs. Sherwood calls her own patients in, takes them back to the examining room, handles usual nursing tasks such as weighing patients and taking temperatures, does chest x-rays and performs other useful tasks that put less of a burden on the existing office staff.

Dr. Quaintance says he is probably seeing a few more patients than he was before Mrs. Sherwood came to work for him, "but the important thing is I'm seeing them better."

A good model for use of the nurse practitioner outside of the office setting but still under the supervision of a community physician can be cited in the rural community in Southwest Virginia, where Dr. Gable's practice is located. Dr. Gable requested funding from the Lutheran Church to hire a nurse to function as nurse practitioner. The church pays her salary to perform this service under a mission program.

The nurse now assisting Dr. Gable has not been through a nurse practitioner training program, although she is presently checking to see if going through the program at the University of Virginia would be practical for her situation. Dawn Bolstad was a registered nurse who had worked for two-and-a-half years as staff nurse in charge of acute illness at the residential treatment center for emotionally and psychologically disturbed chil-

dren in Eau Claire, Wisconsin. After 11 months of interviewing applicants for the job, Dr. Gable hired her because of her experience working independently as a nurse. The physician realized that while supervising the medical care of children, Miss Bolstad had carried out instructions much more independently than a hospital nurse does.

Miss Bolstad assists in raising community health consciousness through programs in the public schools and the community (such as birth control education for women). Although she formulates the programs and does the actual teaching, she and Dr. Gable feed each other ideas for input. Much of the nurse's time is spent in visiting outpatients in the area who require her nursing expertise and, frequently, her judgment. Patients are referred to her by Dr. Gable and a long-time family physician who has an office in the area. The doctors keep up with their patients through the nurse and give her descriptions of what they think the patients need. Miss Bolstad consults by telephone or in person with the respective doctor whenever anything suspicious comes up. ("We talk to each other eyeball-to-eyeball at least once a day," asserts Dr. Gable.)

A number of the people whom Miss Bolstad regularly visits are persons who, Dr. Gable says, probably would otherwise have to be hospitalized in order to receive the proper attention for their conditions. Says the physician—"These people don't like to be hospitalized, don't need to be hospitalized, and can't afford to be hospitalized. This is the answer."

On a routine day, the nurse might take a blood sample from an elderly man and wait at his house for a neighbor employed at a hospital 30 miles away to pick it up and take it in for analysis. Afterwards, she might check the progress of a bedridden arthritic woman in her seventies who (after months of encouragement from the nurse) is just beginning to ambulate herself. The nurse might stop by to instruct a woman who is a diabetic recently released from the hospital on how to give herself shots. Before her day is half over, she might go over to nearby Mount Rogers School (where there is no public health nurse) to screen children's health problems.

The patients seem to know when to call the doctor and when the expertise of a nurse is needed; they frequently call Miss Bolstad at home. She has only been at her post since December, but community acceptance was immediate. The area has had a long history of visiting community nurses who carried out similar responsibilities. It is in situations such as this that nurse practitioners could be most valuable.

Summary

Nurse practice is a new concept in health care and the eventual role of the nurse practitioner will have to be determined by those who have been trained.

Four years ago there were only three family and adult nurse practitioners in the State—one on Tangier Island, one trained by a physician to work in his office and one trained in the University of Virginia feasibility study. Now there are at least 21 active family nurse practitioners from the University of Virginia training program.

The Virginia Regional Medical Program has provided funding to support a professor in the School of Nursing at the University of Virginia. The person in this position will work with faculty in the Department of Medicine to establish a permanent institutional framework for the course, on-going sources of funding, and formal accreditation. Since its inception, the program has been expanded to include obstetrical and pediatric care, as the result of cooperative efforts with Norfolk General Hospital and the University of Virginia School of Nursing.

The University is now looking for more nurses to enter the program, as well as physicians who are interested in supervising a nurse practitioner in providing primary health care.

References

1. Oseasohn, R., Mortimer, E. A., Jr., Geil, C. C., Eberle, B. J., Pressman, A. E., and

Quenk, N. L.: Rural Medical Care—Physician's Assistant Linked to an Urban Medical Center. JAMA 218:9, 1417-1419, 1971.
2. Mayo, F.: Study of Primary Physician Manpower in Virginia 1972—Present Supply and Future Needs. Nov., 1972. Personal Communication.
3. McCormack, R. C., Allen, H. M., and Livers, E. L.: Family Doctors' Use of Office Assistants and Opinions Regarding Nurses in Primary Care. Southern M. J. 64:4, 1971.
4. Proposed Regulations Governing the Certification of Nurse Practitioners. State Board of Medicine and Nursing, 1974.

Journalism Awards Program

Entries are now being received for the American Medical Association 1974 Journalism Awards.

The awards program, now in its eleventh year, was created by the AMA "To recognize journalism that contributes to a better understanding of medicine and health in the United States."

The program provides five awards—newspapers, magazines, radio, television, and editorial writing. First place in each category receives $1,000 and an engraved plaque.

Deadline for all entries is Feb. 3, 1975. Entries must have been published or broadcast during the calendar year 1974. Entries will be judged for accuracy, significance, quality, public interest and impact.

Further information is available from the Journalism Awards Committee, American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610.

Awards in the 1973 program were presented at the annual meeting of the National Association of Science Writers this June in Chicago.

Miscellaneous....

Virginia Professional Standards Review Foundation Chartered

Commonwealth of Virginia

STATE CORPORATION COMMISSION

Richmond, May 24, 1974

This is to Certify that the certificate of incorporation of Virginia Professional Standards Review Foundation was this day issued and admitted to record in this office and that the said corporation is authorized to transact its business subject to all the laws of the State applicable to the corporation and its business.

State Corporation Commission

WILLIAM C. YOUNG
Clerk of the Commission

ARTICLES OF INCORPORATION

Virginia Professional Standards Review Foundation

ARTICLE I. The name of the corporation is

Virginia Professional Standards Review Foundation

ARTICLE II. The purposes of the corporation are to operate as a private foundation as defined in Section 509 of the Internal Revenue Code exclusively for charitable, educational, scientific, and literary purposes, within the meaning of Section 26-501 (c) (3) of the U. S. Code, assuming responsibilities and duties of a support center for professional standards review organizations established, contemplated or planned under Title XI, Part B, of the Social Security Act, as amended, as such support centers are authorized by guidelines promulgated under the auspices of the Secretary of the United States Department of Health, Education and Welfare or to perform similar functions, however, the organizations which are to perform such functions may be designated; to engage in related health service quality assurance activities; to stimulate the development and operation of the professional standards review organization (PSRO) program and the growth of local professional standards review organizations by furnishing a variety of educational, organizational, administrative and professional assistance to such organizations and to those who would organize them and to councils and advisory groups supportive of such organizations, both with respect to review of services performed by physicians and other health care providers and review of the utilization of medical facilities as required by Title XI, Part B of the Social Security Act as amended.

ARTICLE III. The corporation is to have no members.

ARTICLE IV. The affairs of the corporation shall be managed by a Board of Directors. The initial Board shall be as named in Article VI hereof and shall serve during the first year until that time designated in the by-laws for the annual elections from which time the Board shall consist of four officers of The Medical Society of Virginia who shall serve ex officio, namely, the President, the President-Elect, the Past President and the Executive Vice President, the two physicians elected by the Council of The Medical Society of Virginia or a total of six. Provisions may be made in the by-laws for the election of two additional directors to represent each organization by the professional standards review organizations served by the corporation, and for the replacement of directors.

Ex officio directors, initial directors and those who represent professional standards re-

view organizations in this State or who are elected by the Council shall be entitled to vote. All directors shall be entitled to the floor at meetings of the Board and shall be entitled to notice of meetings.

ARTICLE V. (1) The initial registered office of the corporation shall be located in the City of Richmond at:

718 Heritage Building
1001 East Main Street
Richmond, VA 23219

(2) The initial registered agent of the corporation at that address shall be William Read Miller who is a resident of the State of Virginia and a member of the Virginia State Bar.

ARTICLE VI. The names and addresses of the 23 persons who shall constitute the initial Board of Directors are:

John A. Martin, M.D.
2037 Crystal Spring Avenue, S.W., Roanoke, VA 24014

William R. Hill, M.D.
401 West Grace Street, Richmond, VA 23220

Carl E. Stark, M.D.
Box 6, Wytheville, VA 24382

Raymond S. Brown, M.D.
Box 160, Gloucester, VA 23061

William J. Hagood, Jr., M.D.
Little Retreat Clinic, Clover, VA 24354

Harold L. Williams, M.D.
12511 Warwick Boulevard, Newport News, VA 23606

Charles E. Davis, Jr., M.D.
801 Medical Tower, Norfolk, VA 23507

Carrington Williams, Jr., M.D.
204 North Hamilton Street, Richmond, VA 23221

George J. Carroll, M.D.
Box 1100, Suffolk, VA 23434

Girard V. Thompson, Sr., M.D.
Box 570, Chatham, VA 24531

H. C. Alexander, III, M.D.
2037 Crystal Spring Avenue, S.W., Roanoke, VA 24014

George M. Nipe, M.D.
1031 South Main Street, Harrisonburg, VA 22801

Thomas L. Lucas, M.D.
202 North Columbus Street, Alexandria, VA 22314

James Hal Smith, M.D.
P. O. Box 367, Christiansburg, VA 24073

W. Leonard Weyl, M.D.
4625 Old Dominion Drive, Arlington, VA 22207

Robert L. A. Keeley, M.D.
1234 Franklin Road, Roanoke, VA 24016

Robert K. Maddock, M.D.
601 Medical Tower, Norfolk, VA 23507

Frank C. Robert, M.D.
2019 Cunningham Drive, Suite 220, Hampton, VA 23366

Thomas L. Gorsuch, M.D.
Box 400, Waynesboro, VA 22980

Joseph H. Early, Jr., M.D.
Main Street, Hillsville, VA 24343

William M. O'Brien, M.D.
Box 213, University of Virginia School of Medicine, Charlottesville, VA 22901

Frank G. Turner, M.D.
150 West Main Street, Danville, VA 24541

Howard O. Mott, M.D.
829 North Lincoln Street, Arlington, VA 22201

BY-LAWS

Virginia Professional Standards Review Foundation

ARTICLE I—NAME

The name of this corporation is Virginia Professional Standards Review Foundation.

ARTICLE II—PURPOSE

The Foundation is a nonprofit organization to be operated for the purposes set forth in its charter.

ARTICLE III—MEMBERSHIP

There shall be no members as such and no shareholders of the Foundation.

ARTICLE IV—CORPORATE POWERS

Section 1. Corporate power shall be vested in the Board of Directors.

Section 2. The Board of Directors shall have full power to control and manage the affairs of the Foundation.

ARTICLE V—BOARD OF DIRECTORS

Section 1. The Board of Directors shall be composed of six (6) members: The President, President-Elect, Immediate Past President and Executive Vice-President of The Medical Society of Virginia shall be members by virtue of the office they hold, and there shall be two (2) other members appointed at large by Council of The Medical Society of Virginia. In addition, the Board when it shall enter an agreement or contract to serve a professional standards review organization shall arrange for election by that organization of two physicians who shall serve on the Board as representatives of the organization and of the physicians who practice in the area designated by the Secretary of the United States Department of Health, Education and Welfare for that professional standards review organization.

Section 2. The two directors elected by the Council of The Medical Society of Virginia shall each serve a term of three years. Other directors elected pursuant to the provision of the Section 1 shall serve for a period conterminous with that for which the directors chosen by the Council of The Medical Society were elected.

Section 3. The members of the Ad Hoc Committee on Peer Review and the members of the Council of The Medical Society of Virginia who are entitled to vote have been named in the Articles of Incorporation as the initial Board of Directors and shall serve as such until the annual election.

Section 4. Any director may be removed by that body by which he was elected, in accordance with the provisions of Section 13.1-221 of the Code of Virginia at any regular or special meeting provided that written notice giving the reasons for such removal is sent to each Director at least ten (10) days prior to the date of such meeting.

Section 5. In the event a person who has been named or elected to the Board of Directors shall decline to serve or shall resign or die or be removed from office, the vacancy resulting shall in the instance of a member of the initial Board of Directors be filled by the Council of The Medical Society of Virginia, which body shall be considered for all the purposes of these By-Laws to have elected the initial Board of Directors. A vacancy so occurring in a Board of Directors after the initial Board of Directors shall be filled by the body electing the person whose directorship has become vacant except that the Council of The Medical Society of Virginia may elect a physician to fill a vacancy in an ex officio directorship. This By-Law shall apply regardless of the number of vacancies or the manner in which the vacancies shall have occurred.

ARTICLE VI—MEETINGS

Section 1. There shall be at least one meeting each year which shall be known as the annual election meeting and shall be held within one month after the annual meeting of The Medical Society of Virginia at a time and place to be set by the Board of Directors.

Other regular meetings of the Board of Directors shall be held without call according to a published schedule approved by the Board of Directors.

Section 2. Special meetings of the Board of Directors for any purpose may be called at any time by the President, or if he is absent or unable to act, or refuses to act, then by the Vice-President, or by any three (3) Directors.

Written notice of the time and place of a special meeting shall be mailed at least three weeks in advance of the time of the meeting.

This requirement can be waived when the President and the Vice President or any four Directors declare that in their opinion an emergency situation exists.

Section 3. A quorum shall be 50% or more of the voting members of the Board of Directors.

Section 4. Voting by proxy or mail is expressly prohibited.

ARTICLE VII—OFFICERS

Section 1. The officers of the Foundation shall be a President, Vice-President, Secretary, Treasurer, and other Officers considered desirable by the Board of Directors.

Section 2. The election of officers shall take place at the annual election meeting.

Section 3. A vacancy in any office may be filled by appointment by the President. Such appointment will be subject to approval by the Board of Directors at the next meeting.

Section 4. The President will preside at all meetings of the Board of Directors. He is the official representative of the Foundation at meetings of cooperating and affiliated organizations. He calls all regular and special meetings. He appoints all committees, designates committee chairmen and is an ex officio member of all committees.

Section 5. The Vice-President will perform the duties of the President in his absence.

Section 6. The Secretary will record and preserve the minutes of all meetings of the Board of Directors.

Section 7. The Treasurer will maintain adequate and correct accounts of the properties and business transactions of the Foundation. He will deposit all money to the credit of the Foundation in banks or other insured depositories, designated by the Board of Directors. He will be bonded and the books audited annually.

ARTICLE VIII—EXECUTIVE OFFICER

Section 1. The Board of Directors will appoint an Executive Director and other necessary executives.

Section 2. The Executive Director will attend all meetings of the Board of Directors and will be responsible for managing the administrative affairs of the Foundation. He will report to and be responsible to the Board of Directors for the proper management of the Foundation. He will employ additional staff needed for the proper management of the Foundation, as authorized by the Board of Directors.

Section 3. Additional executive officers may be appointed by the Board of Directors in accordance with the requirements of the Foundation. The duties and responsibilities of these executive officers will be defined by the Board of Directors.

ARTICLE IX—REPORTS

Section 1. Thirty days prior to the annual meeting of The Medical Society of Virginia, a full and comprehensive annual report of the activities of the Foundation will be submitted to the Council of The Medical Society of Virginia for presentation to the delegates of the Society at the time of its annual meeting. This report, after approval, may be distributed to all other interested agencies and organizations.

Section 2. Other reports will be prepared and submitted to the appropriate organizations as required by law and as directed by the Board of Directors.

ARTICLE X—ARTICLES OF DISSOLUTION

In the event of the dissolution of the Foundation, assets of the Foundation shall be applied and distributed according to the provisions of Section 13.1-249 of the Code of Virginia.

ARTICLE XI—AMENDMENTS

Section 1. These By-Laws may be amended, repealed or altered in whole or in part by a majority vote of the Board of Directors

present at any annual election meeting or at a special meeting if the proposed amendments shall have been announced in the call or notice of such meeting.

Section 2. The By-Laws shall be reviewed annually by a committee appointed from the Virginia Professional Standards Review Foundation Board of Directors by its President. The committee shall recommend to the Virginia Professional Standards Review Foundation any proposed amendments. Every five (5) years the committee shall make a general review of the By-Laws and submit the proposed revisions to the Virginia Professional Standards Review Foundation for action.

ARTICLE XII–PARLIAMENTARY AUTHORITY

STURGIS STANDARD CODE OF PARLIAMENTARY PROCEDURE shall govern the Foundation in all cases to which it is applicable, and in which it is not inconsistent with these By-Laws.

Approved: 6/14/74

Research on Convicts Called Unethical

Under the conditions existing today in most American prisons, medical research involving the use of human subjects goes contrary to medical ethics and professional standards, declares an article in a July issue of the *Journal of the American Medical Association.*

George Bach-y-Rita, M.D., of the University of California School of Medicine at San Francisco, declares that "Too often the only concern of researchers working with prisoners is how best to use their subjects, with little regard for the institution, or for the inmate as a person."

Informed consent on the part of a convict participating in a medical research study is virtually impossible under conditions in most prisons.

"Information about the experiment can be provided by the researcher, but a judgment about an acceptable degree of risk requires contact with the free world as opposed to the prison environment. What may be perceived as an acceptable risk for a person inside a prison may be totally unacceptable for that same person outside.

"Lack of unimpeded access to information, absence of advice from a physician friend of the prisoner's own choosing, lack of legal counsel, censorship of mail, and the long-term isolation from the changing ideas of society greatly restrict the prisoner's ability to evaluate the magnitude of his risk and thus to make an informed decision about a research contract."

"Coercion as an institutional policy is incompatible with research. When information regarding a person's participation is used in formulating decisions about a prisoner's degree of freedom, research is not possible.

"In every instance, responsibility ultimately rests with the investigator. It is he who must assure that conditions compatible with current social mores are present prior to starting a project."

PRELIMINARY PROGRAM

127th Meeting

The Medical Society of Virginia

Williamsburg Conference Center
Williamsburg, Virginia
November 3-6, 1974

The Medical Society of Virginia

WILLIAMSBURG CONFERENCE CENTER

WILLIAMSBURG, VIRGINIA

NOVEMBER 3-6, 1974

SPECIAL EVENTS

SATURDAY, NOVEMBER 2

Virginia Dermatological Society

6:00 P.M.—Cocktails—(Council II, Cascades)

7:00 P.M.—Banquet

SUNDAY, NOVEMBER 3

9:00 A.M.

COUNCIL

Room C

2:00 P.M.

HOUSE OF DELEGATES

Virginia Room

SPECIAL EVENTS

SUNDAY, NOVEMBER 3

Council, The Medical Society of Virginia

9:00 A.M.—Business Session (Room C)

12:00 Noon—Luncheon (Room A)

Virginia Dermatological Society

9:00 A.M.—Program and Business Meeting (Auditorium)

1:00 P.M.—Luncheon (Room B)

House of Delegates, The Medical Society of Virginia

2:00 P.M.—Virginia Room

VaMPAC

6:00 P.M.—Cocktails (North Gallery)

7:00 P.M.—Banquet (Tidewater Room)

Virginia Flying Physicians Association

6:30 P.M.—Reception (Room 405, South Wing, Lodge)

MONDAY MORNING, NOVEMBER 4

9:00 A.M.

Session "A"—AUDITORIUM

Welcome and Preliminary Announcements—G. S. Mitchell, M.D., Chairman, Committee on Arrangements.

SCIENTIFIC PROGRAM

PANEL ON VIRGINIA MEDICAL SCHOOLS—Featuring messages from our three Deans.

9:00 A.M.—Warren H. Pearse, Dean, Medical College of Virginia, Richmond.

9:15 A.M.—William R. Drucker, M.D., Dean, University of Virginia School of Medicine, Charlottesville.

9:30 A.M.—Robert T. Manning, M.D., Dean, Eastern Virginia Medical School, Norfolk.

9:45 A.M.—Question and Answer period.

SYMPOSIUM ON NURSE MIDWIVES, NURSE PRACTITIONERS AND PHYSICIANS' ASSISTANTS—Sponsored by the Virginia Obstetrical & Gynecological Society and Virginia Academy of Family Physicians.

10:00 A.M.—*Guest Speaker*—Henry A. Thiede, M.D., Associate Dean, University of Mississippi Medical Center, Jackson, Miss.

10:25 A.M.—George J. Carroll, M.D., Suffolk, Secretary-Treasurer, Virginia State Board of Medicine.

10:35 A.M.—James G. Nuckolls, M.D., Galax.

10:45 A.M.—Question and Answer period.

11:00 A.M.—*Coffee in the Exhibit Hall.*

11:30 A.M.—Diagnosis and Treatment of Malignant Tumors of the Eyelid—James H. Carraway, M.D., Charles E. Horton, M.D., Jerome E. Adamson, M.D., and Richard A. Mladick, M.D., Norfolk.

Malignant tumors of the eyelid constitute a very special category both in terms of diagnosis and treatment. There are many lesions which occur around the eyelid and a certain percentage of these are malignant or may undergo malignant degeneration. It is imperative for the practicing physician to recognize these lesions and be able to determine which require biopsy and definitive treatment. Methods of reconstruction of the eyelids in our experience include cheek flaps, full thickness grafts, local flaps, switch eyelid flaps and the Hughes type procedure of tarsoconjunctival shearing. Because of the nature of the lesions it is felt that surgical treatment is preferred over radiation therapy for these tumors.

11:45 A.M.—A Retrospective Study of Carcinoma of the Lip—Kenneth A. Marshall, M.D., and Milton T. Edgerton, M.D., Charlottesville.

A retrospective study has been done of the experience of the past twenty years in the management of this disease at the University of Virginia. The records of 130 patients were reviewed. The most common patient profile for this disease in this particular geographical region was reconstructed. Tumor location, size, histology and ultimate behavior were documented. Treatment modalities and long term results were analyzed. The goals, achievements, and failures of a variety of plastic surgical reconstructions were assessed retrospectively. Recommendations for the prevention and management of this disease will be made.

12:00 Noon—Electrical Injury—A Protean Pathologic Display—J. C. Fisher, M.D., J. H. Wells, M.D. and K. A. Marshall, M.D., Charlottesville.

Based on clinical experience with 10 patients treated for a wide range of electrical injuries at the University of Virginia Hospital, several principles of management of these difficult but not uncommon injuries are presented.

12:15 P.M.—Question and Answer period.

12:30 P.M.—Recess.

9:00 A.M.

Session "B"—TIDEWATER ROOM

Symposium on Dermatology—Sponsored by Virginia Dermatological Society.

9:00 A.M.—Skin Lesions of the Face Simulating Lupus Erythematosus—Kenneth E. Greer, M.D., Charlottesville.

9:15 A.M.—*Guest Speaker*—John R. Haserick, M.D., Pinehurst, N. C., Immediate Past-President of the American Academy of Dermatology.

9:45 A.M.—Question and Answer period.

10:00 A.M.—Trigeminal Neuralgia Treated by Radiofrequency Rhizotomy—William M. Chadduck, M.D., Martinsville.

The use of newly defined radiographic landmarks in combination with low voltage stimulation of the retrogasserian rootlets has allowed trigeminal neuralgia to be treated effectively by percutaneous radiofrequency coagulation of the trigeminal rootlets. It is possible to limit the lesion to certain divisions of the trigeminal nerve and preserve touch sensation in the face. The danger of facial paralysis is completely eliminated. In this report the technique will be described and results of treatment presented.

10:15 A.M.—Primary Amebic Meningoencephalitis Due to Naegleria Sp.: Associated Myocarditis—A. Julio Martinez, M.D., Sheldon M. Markowitz, M.D., Richard J. Duma, M.D., and Fergus O. M. Shiel, M.D., Richmond.

A retrospective study of autopsies from 16 cases of primary amebic meningoencephalitis at M.C.V. was carried out (from July 19, 1937 to July 15, 1969). Seven of the 16 cases showed myocarditis. The etiology and pathogenesis of this myocarditis will be discussed.

10:30 A.M.—Normal Pressure Hydrocephalus—A Treatable Cause of Dementia—Harold F. Young, M.D., Donald P. Becker, M.D., and John K. Vries, M.D., Richmond.

Adult normal pressure hydrocephalus is a rare clinical syndrome of memory loss, gait disturbance, and urinary incontinence. The syndrome can now be accurately diagnosed and easily treated.

10:45 A.M.—Question and Answer period.

11:00 A.M.—*Coffee in Exhibit Hall.*

Symposium on Coronary Artery Surgery—Alan G. Bartel, M.D., Norfolk, Moderator.

11:30 A.M.—Joel P. Schrank, M.D., Charlottesville.

11:50 A.M.—Richard R. Lower, M.D., Richmond.

12:10 P.M.—Question and Answer period.

12:30 P.M.—Recess.

MONDAY AFTERNOON, NOVEMBER 4

2:00 P.M.

General Session—AUDITORIUM

SYMPOSIUM ON "LIFE OR DEATH—WHOSE DECISION?"—Sponsored by Committee on Medicine and Religion—Arne E. Larson, Director, Department of Medicine and Religion, AMA, Chicago, Moderator.

2:00 P.M.—MEDICAL ASPECTS—Anthony Shaw, M.D., Charlottesville.

2:20 P.M.—LEGAL ASPECTS—*Guest Speaker*—Jack B. Russell, Attorney at Law, Richmond.

2:40 P.M.—THEOLOGICAL ASPECTS—*Guest Speaker*—William B. Oglesby, Jr., D.D., Ph.D., Union Theological Seminary, Richmond.

3:00 P.M.—Question and Answer period.

3:15 P.M.—Adjourn.

3:00 P.M.

Reference Committee #1—Room F
Reference Committee #2—Room A
Reference Committee #3—Tidewater Room

SPECIAL EVENTS

MONDAY, NOVEMBER 4

VaMPAC

7:30 A.M.—Breakfast—Board of Directors (Room C)

American College of Radiology, Virginia Chapter

1:00 P.M.—Luncheon (Room C)

Virginia Obstetrical & Gynecological Society

1:00 P.M.—Luncheon (Room B)

American College of Physicians, Virginia Section

1:00 P.M.—Luncheon (Rooms D-E)

Medical College of Virginia Medical Alumni Association

6:00 P.M.—Reception (Virginia Room)

7:00 P.M.—Banquet (Virginia Room)

Duke University School of Medicine Alumni Association, Virginia Chapter

6:00 P.M.—Cocktails (Rooms E-F)

7:00 P.M.—Banquet (Rooms E-F)

University of Virginia Medical Alumni Association

6:00 P.M. to 7:30 P.M.—Cocktails (Rooms A-B-C)

TUESDAY MORNING, NOVEMBER 5

9:00 A.M.

Session "A"—AUDITORIUM

SYMPOSIUM ON "ALCOHOLISM—ILLNESS, CRIME OR SELF-DESTRUCTION? THE PHYSICIAN'S RESPONSIBILITY?"—Sponsored by Neuropsychiatric Society of Virginia.

9:00 A.M.—John Buckman, M.D., Charlottesville.

9:20 A.M.—Andrew A. Hendricks, M.D., Charlottesville.

9:40 A.M.—Question and Answer period.

10:00 A.M.—DRUG ADDICTION AMONG PHYSICIANS—Robert C. Greene, Jr., M.D., Winchester, George J. Carroll, M.D., Suffolk, and W. Dimmock Buxton, M.D., Charlottesville.

This study analyzes 35 cases of drug addiction reported to the Virginia State Board of Medicine. The characteristics of this group of physician addicts are defined and the factors leading to their addiction discussed.

10:15 A.M.—ENDOGENOUS DEPRESSION IN INFANCY AND CHILDHOOD—Helen J. Ossofsky, M.D., McLean.

Endogenous depression can be diagnosed in infancy and childhood. The symptoms appeared identical to many reported as the so-called "minimal cerebral dysfunction". Successful treatment is dependent upon recognition of depression; specific therapy controls all symptoms and appears to prevent much disabling mental illness. Imipramine proved to be an effective and safe drug.

10:30 A.M.—Psychological Factors in the Etiology of Lung Cancer—Robert S. Brown, Ph.D., M.D., N. M. Wilkins, Ph.D., W. D. Buxton, M.D., and D. W. Abse, M.D., Charlottesville.

Psychiatric studies indicate possible personality differences between the general smoking public and those who eventually develop lung cancer. Since lung cancer patients are known to be heavy smokers, it is suggested that they differ from the general smoker, both in their patterns of smoking and in their more general patterns of psychological functioning. An expanded and detailed history of smoking is therefore necessary in order to identify those patients who are at the greatest risk of developing lung cancer.

10:45 A.M.—Question and Answer period.

11:00 A.M.—*Coffee in Exhibit Hall.*

11:30 A.M.—Arterial Blood Gas Analysis in Patients Presenting with Chest Pain—Emil J. Kleinholz, Jr., M.D., and G. Baisey, R.N., Richmond.

Arterial blood gas studies obtained on 73 patients admitted to a Coronary-Intensive Care Unit with chest pain are analyzed. Thirty patients had documented myocardial infarctions. The incidence of hypoxemia and acid base disturbances in the patients with and without documented myocardial infarctions was extremely high.

11:45 A.M.—A New Antiarrhythmic Agent—Disopyramide Phosphate—James C. Laidlaw, M.D., Winchester.

Seventeen patients were studied in a single blind program where the patient was on placebo for four weeks, disopyramide phosphate for eight weeks and placebo for four weeks. Each patient was monitored prior to the study on ten hour tapes (Holter type), on placebo, two times on disopyramide phosphate and during the last four weeks placebo period. During all these monitorings quantitation was made of the number of premature ventricular beats to assess the effectiveness of the drug against this particular arrhythmia. A reduction was noted.

12:00 Noon—Use of New Screw-In Myocardial Pacemaker Electrodes in Poor Risk Patients—Francis T. Thomas, M.D., Richmond.

This recently introduced technique avoids the disadvantages of the previously used transvenous technique for pacemaker electrode placement. The Screw-In technique has been used in 13 poor risk patients with good early results and no operative mortality. This experience suggests a wider applicability of the technique.

12:15 P.M.—Question and Answer period.

12:30 P.M.—Recess.

9:00 A.M.

Session "B"—TIDEWATER ROOM

9:00 A.M.—Echocardiography in the Diagnosis of Heart Disease in the Infant and Child—Jon B. Tingelstad, M.D., Richmond.

Echocardiography is proving to be an increasingly valuable tool in detecting and diagnosing heart disease in pediatric patients. This harmless and painless non-invasive method employs high frequency sound; the results are reproducible. It may provide information concerning heart valves, chamber size, muscle contractility, and pericardial effusior

9:15 A.M.—Goiters in Childhood and Adolescence—R. B. Young, M.D., Richmond.

A review of a series of cases studied by the author who have had goiters with varying etiology including autoimmune thyroiditis, maldescent, goitrogens, borderline hyperthyroidism and dyshormonogensis. The presentation will emphasize the diagnostic and therapeutic approach to these entities.

9:30 A.M.—The Athletic Electrocardiogram—John A. Horgan, M.D., Newport News, and Richard S. Crampton, M.D., Charlottesville.

The electrocardiograms of two endurance athletes demonstrated biventricular hypertrophy and symmetrical T wave inversion with normalization on exercise. Echocardiography revealed increased left ventricular septal and posterior wall thickness, indicating that the electrocardiogram reflects symmetrical myocardial hypertrophy.

9:45 A.M.—Question and Answer period.

10:00 A.M.—Kidney Transplantation—1974—James C. Pierce, M.D., H. M. Lee, M.D., and James S. Wolf, M.D., Richmond.

A discussion of the prognosis for patients currently receiving kidney transplants based on a review of 292 transplants in 248 patients at the Medical College of Virginia. The annual mortality rate of the total population of kidney transplant recipients fell to 6.8% in 1973 which is comparable to that of patients on hemodialysis.

10:15 A.M.—Articular Complications of Homotransplantation and Chronic Renal

Hemodialysis—W. Robert Irby, M.D., William Edwards, M.D., Richmond, and Robert Gatter, M.D., Abington, Penn.

Renal homotransplantation and chronic hemodialysis have come to be accepted methods of treating end-stage kidney disease. However, these procedures are fraught with complications involving bones, joints, and soft tissues. Transplantations and immunosuppressive therapy problems include "autoimmune" reactions, infections in joints, and avascular necrosis of bone. Hemodialysis complications include further problems with hyperparathyroidism and renal osteodystrophy.

10:30 A.M.—Differential Renal Vein Renin and Peripheral Renin in Hypertensive Patients with Unilateral Parenchymal Disease—Edwin Darracott Vaughan, Jr., M.D., Charlottesville.

In the majority of hypertensive patients with unilateral renal parenchymal disease, differential renal vein renin and peripheral renin values fail to meet criteria previously found to identify potentially curable patients with renal artery stenosis. Thus, abnormal renin secretion from the involved kidney does not appear to be the mechanism of their hypertension. Treatment of their hypertension should be medical and not surgical.

10:45 A.M.—Question and Answer period.

11:00 A.M.—*Coffee in Exhibit Hall.*

11:30 A.M.—Russia and Russian Surgical Education—1974—Jay Y. Gillenwater, M.D., Charlottesville.

A report based on personal visits to a number of Russian educational institutions in Moscow and Leningrad. The author spent several days studying the urological and pediatric surgical services and also had an opportunity to visit Russian grammar schools.

11:45 A.M.—Stroke and Extracranial Vascular Disease—Ronald K. Davis, M.D. and Laurie E. Rennie, M.D., Richmond.

During the four year period from January, 1970, to January, 1974, two hundred patients with transient ischemic attacks or progressive stroke were evaluated with arteriography. One hundred and thirty-five surgical procedures were performed for extracranial blocks. The result of the surgical management of this disease has been gratifying.

12:00 Noon—Prostaglandins and Fertility Control—William M. Bickers, M.D., Richmond, and Nils Wiqvist (Sweden).

Discovery of the Prostaglandins has unveiled a new therapeutic world in reproductive physiology. Elective induction of labor and termination of pregnancy at any period of gestation is possible but there are limitations and there may be serious side effects.

12:15 P.M.—Question and Answer period.

12:30 P.M.—Recess.

TUESDAY AFTERNOON, NOVEMBER 5

2:00 P.M.

General Session—AUDITORIUM

2:00 P.M.—Eighteenth Century Medicine in Virginia—Elam C. Toone, M.D., Richmond.

Virginia, during the 18th Century, was the scene of several medical events of unusual interest to the profession. Among these was included performance of the first known successful Cesarean Section in this country by the husband-doctor of the patient and the erection of the first mental institution in the colonies.

Thieves' Market—A special presentation featuring capsule case histories and audience participation.

2:15 P.M.—An Unusual Heritable Disorder—William M. Edwards, M.D., Richmond.

2:20 P.M.—Large Upper Abdominal Mass—B. H. Raymond, M.D., Norfolk.

2:25 P.M.—Pseudo-Pseudo Gout—S. Koller, M.D., Richmond.

2:30 P.M.—Heart Failure Without Heart Disease in Child—T. Eugene Temple, Jr., M.D., H. W. Templeton, M.D., and John A. Horgan, M.D., Newport News.

2:35 P.M.—Fat Lip—J. C. Fisher, M.D., D. B. Tuerk, M.D., and F. C. Askew, M.D., Charlottesville.

2:40 P.M.—Lifelong Jaundice—Rahmat M. Seif, M.D., Roanoke.

2:45 P.M.—Lupus and Virus—Jesse M. Jones, M.D., A. Julio Martinez, M.D., Vijay V. Joshi, M.D., William J. S. Still, M.D., and Nancy McWilliams, M.D., Richmond.

2:50 P.M.—Anticoagulation Endocrinopathy—Concetto S. Rametta, M.D., Charlottesville.

2:55 P.M.—Question and Answer period.

3:15 P.M.—Adjourn.

SPECIAL EVENTS

TUESDAY, NOVEMBER 5

Christian Medical Society
7:30 A.M.—Breakfast (Room F)

Virginia Diabetes Association
7:30 A.M.—Breakfast (Room G)

International College of Surgeons, Virginia State Surgical Division
1:00 P.M.—Luncheon (Room D)

Virginia Industrial Medical Association
1:00 P.M.——Luncheon (Room D)

Virginia Urological Society
1:00 P.M.—Luncheon (Room E)

Virginia Academy of Family Physicians
1:00 P.M.—Luncheon (Virginia Room)

House of Delegates, The Medical Society of Virginia
3:00 P.M.—Tidewater Room

The Medical Society of Virginia
6:30 P.M.—Reception (North Gallery)
7:30 P.M.—Banquet (Virginia Room)

WEDNESDAY MORNING, NOVEMBER 6

9:30 A.M.

General Session—AUDITORIUM

SYMPOSIUM ON DOCUMENTATION OF CONTINUING MEDICAL EDUCATION FOR RELICENSURE—James M. Moss, M.D., Alexandria, Moderator.

9:30 A.M.—WHY IT'S NECESSARY—Robert C. Green, Jr., M.D., Winchester.

9:50 A.M.—WHY IT'S UNDESIRABLE—W. Leonard Weyl, M.D., Arlington.

10:10 A.M.—AN ALREADY WORKING PROGRAM —Robert L. Cassidy, M.D., Norfolk.

10:30 A.M.—Question and Answer period.

11:00 A.M.—Adjourn.

SCIENTIFIC EXHIBITS

North Ballroom and Mezzanine

PROGNOSTIC VALUE OF VASCULAR INVASION OF SQUAMOUS CELL CARCINOMA OF THE HEAD AND NECK—Slobodan Poleksic, M.D., and Henry J. Kalwaic, D.D.S., VA Center, Hampton.

APPROACH TO EARLY DIAGNOSIS OF BREAST CANCER—Anne C. Brower, M.D., Hans O. Riddervold, M.D., and Charles D. Teates, M.D., University of Virginia Hospital, Charlottesville.

TREATMENT OF CANCER OF PROSTATE AND BLADDER BY ARTERIAL INFUSION CHEMOTHERAPY—J. E. Nevin, M.D., I. Melnick, M.D., J. T. Baggerly, M.D., and R. R. Landes, M.D., Danville Urologic Clinic, Danville.

CANCER IN CHILDREN—American Cancer Society, Virginia Division, Richmond.

ALLERGY AND ALLERGENS—Norfolk Health Department, Norfolk.

PROBLEM-ORIENTED MEDICAL RECORD EDUCATIONAL MATERIALS—Health Information Services, Incorporated, Norfolk.

VASECTOMY, VAS LIGATION, AND VAS OCCLUSION—Hans J. Klapproth, M.D., and Ira S. Young, M.D., Annandale.

INDUSTRIAL HEARING CONSERVATION—Virginia Industrial Medical Association, Richmond.

CARDIOPULMONARY REHABILITATION—The Wirt Hatcher Memorial Cardiopulmonary Rehabilitation of the Retreat Hospital, Richmond.

AMBULATORY CARDIOVASCULAR DIAGNOSTIC TECHNIQUES—Charles L. Baird, M.D., Director, The Virginia Heart Institute, Richmond.

SOUTHERN MEDICAL ASSOCIATION CANCER INFORMATION CENTER—Southern Medical Association, Birmingham, Alabama.

ELECTRICAL SAFETY IS YOUR RESPONSIBILITY—A. M. Clarke, Ph.D., and P. Boyan, M.D., Medical College of Virginia, Richmond.

BLOOD COMPONENT PREPARATION—S. Hunter, M.D., D. Dabbs, M.T. (ASCP), P. Boyan, M.D., Medical College of Virginia, Richmond.

NASAL CPAP IN RESPIRATORY DISTRESS SYNDROME—B. V. Kirkpatrick, M.D., and David A. Draper, M.D., Richmond

PSRO INFORMATION—Virginia Professional Standards Review Foundation, Charlottesville.

EMCRO—Albemarle County Medical Society Committee on EMCRO, Charlottesville.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Virginia Society.

TECHNICAL EXHIBITS

(These exhibits will be in the North Ballroom of the Convention Center.)

ABBOTT LABORATORIES, North Chicago, Illinois

BIOMEDICAL LABORATORIES, INCORPORATED. Burlington, North Carolina

BLUE SHIELD OF VIRGINIA, Richmond, and BLUE SHIELD OF SOUTHWESTERN VIRGINIA, Roanoke

BOERINGER-INGLEHEIM LTD., Elmsford, New York

BRISTOL LABORATORIES, Syracuse, New York

COMPREHENSIVE PSYCHIATRIC SERVICES. Tidewater Psychiatric Institute, Hampton

DAVID A. DYER & ASSOCIATES, Roanoke

THE EMKO COMPANY, St. Louis, Missouri

FISONS CORPORATION, Bedford, Massachusetts

C. B. FLEET COMPANY, INCORPORATED, Lynchburg

GENERAL MEDICAL CORPORATION, Richmond

LAKESIDE LABORATORIES, INCORPORATED. Milwaukee, Wisconsin

ELI LILLY AND COMPANY, Indianapolis, Indiana

MEAD JOHNSON AND COMPANY, Evansville, Indiana

MEDICAL SPECIALTIES OF VIRGINIA, Roanoke

MEDTRONIC SALES, INCORPORATED, Arlington

THE PENNYRICH CORPORATION, Dallas, Texas

WM. P. POYTHRESS & COMPANY, INCORPORATED, Richmond

PSYCHIATRIC SERVICES FOR ADOLESCENTS AND CHILDREN—Commonwealth Psychiatric Center, Richmond.

A. H. ROBINS COMPANY, INCORPORATED, Richmond

SANDOZ PHARMACEUTICALS, East Hanover, New Jersey

W. B. SAUNDERS COMPANY, Philadelphia, Pennsylvania

THE ST. PAUL COMPANIES, St. Paul, Minnesota

THE STUART COMPANY, Wilmington, Delaware

SUTER ASSOCIATES, Arlington

TRAVELERS INSURANCE COMPANIES, MEDICARE CLAIM DEPARTMENT, Richmond

WADDELL REHABILITATION CENTER, Galax

DELEGATES

Where no name is listed it is indicative that no delegate or alternate was reported in time for publication.

Delegates	*Alternates*
ACCOMACK	
Dr. D. F. Fletcher	Dr. W. A. Eskridge
ALBEMARLE	
Dr. T. S. Edwards	Dr. A. S. Bender
Dr. John A. Owen, Jr.	Dr. J. S. Davis, IV
Dr. F. E. Taylor	Dr. L. B. McGuire
Dr. M. S. Wheby	Dr. S. E. Miller
Dr. A. W. Wyker	Dr. H. D. Smallwood
ALEXANDRIA	
Dr. R. H. Anderson	Dr. M. H. Kendrick
Dr. W. E. Baker	Dr. J. P. McDade
Dr. H. H. Ferrell, Jr.	Dr. C. R. Meloni
Dr. J. E. Gibson	Dr. G. F. Miller
Dr. I. J. Green	Dr. J. W. Preuss
Dr. H. C. Kuykendall	Dr. R. J. Redding
Dr. Christopher Murphy, Jr.	Dr. H. G. Thompson
ALLEGHANY-BATH	
Dr. Mamerto Adrales	Dr. E. M. Bowles
Dr. C. F. Ballou	Dr. W. W. Harris, Jr.
Dr. L. R. Denius	Dr. L. E. G. Mineiro
Dr. W. C. Nunley	Dr. D. S. Myers
Dr. U. M. Powell	Dr. W. E. Vermilya

Delegates	*Alternates*
AMHERST-NELSON	
ARLINGTON	
Dr. J. C. Bucur	Dr. H. L. Bastien
Dr. G. J. Fisher	Dr. L. B. Burk, Jr.
Dr. J. H. Judson	Dr. H. G. Hopwood, Jr.
Dr. T. L. Kelly, Jr.	Dr. J. H. Peacock
Dr. R. P. Nirschl	Dr. B. C. Snyder
AUGUSTA	
BEDFORD	
Dr. T. H. Jennings	Dr. J. R. Wenger, Jr.
BOTETOURT	
BUCHANAN-DICKENSON	
Dr. R. W. Hess	Dr. R. F. Baster
Dr. J. P. Sutherland	Dr. B. D. Berry
CHARLOTTE	
CULPEPER	
Dr. G. E. Broman	Dr. J. B. Jones

Delegates	Alternates
DANVILLE-PITTSYLVANIA	
Dr. R. R. Landes	Dr. E. J. Harvie, Jr.
Dr. G. B. Updike, Jr.	Dr. J. W. Milam
FAIRFAX	
Dr. W. L. Bekenstein	Dr. A. C. Adler
Dr. C. B. Cook	Dr. W. C. Bernhart
Dr. R. L. Fields	Dr. L. I. Block
Dr. T. M. Fulcher	Dr. M. M. Bocknek
Dr. I. D. Godwin	Dr. J. N. Cooper
Dr. H. J. Klapproth	Dr. F. G. Gentile
Dr. Alan Mackintosh	Dr. R. J. Gillanders
Dr. J. E. Prominski	Dr. W. J. Reardon
Dr. O. E. S. Stevenson	Dr. T. M. Wright
Dr. N. M. Tart	
Dr. D. S. Thorn	
FAUQUIER	
Dr. J. F. Denton	Dr. A. C. Wagner
FLOYD	
Dr. L. V. Marshall	Dr. F. C. Bedsaul
FRANKLIN	
FREDERICKSBURG	
Dr. F. B. Harrington	Dr. William Hollister, Jr.
Dr. M. J. Olichney	Dr. S. E. Kohler
Dr. L. E. Southworth	Dr. W. D. Liddle, Jr.
Dr. J. A. Trice	Dr. F. A. Phillips
Dr. H. L. Westfall, Jr.	Dr. D. W. Scott, Jr.
HALIFAX	
Dr. F. G. Wray	Dr. G. C. Burnett
	Dr. W. R. Watkins
HAMPTON	
Dr. R. F. Clark	Dr. H. A. Farrar
Dr. F. C. Robert	Dr. K. D. Sarrett
HANOVER	
PATRICK HENRY	
Dr. H. S. Campbell	Dr. R. E. Herring, Jr.
Dr. J. D. French	Dr. B. C. Toms
JAMES RIVER	
Dr. W. S. Lloyd	Dr. C. R. Barton
Dr. R. N. Snead	Dr. M. A. Pennington
Dr. J. H. Yeatman	Dr. A. C. Whitley
LEE	
Dr. B. H. Owens	Dr. G. B. Setzler
LOUDOUN	
Dr. W. A. Oyen	Dr. G. T. Hocker

Delegates	Alternates
LOUISA	
LYNCHBURG	
Dr. W. H. Barney	Dr. F. N. Buck, Jr.
Dr. D. B. Hill	Dr. P. G. Dillard, Jr.
Dr. W. E. Painter	Dr. P. F. Fitzgerald
Dr. J. W. Stone	Dr. R. L. Glenn
MID-TIDEWATER	
Dr. R. B. Bowles	Dr. F. G. Diaz
Dr. H. W. Felton	Dr. Paul Hogg
Dr. P. L. Fisher	Dr. H. B. Hudgins
Dr. M. H. Harris	Dr. N. H. Oster
Dr. W. H. Hosfield	Dr. S. N. Ransone
Dr. A. J. Martin	Dr. J. L. Wise, Jr.
Dr. Shirley Olsson	
Dr. W. C. Salley	
NEWPORT NEWS	
Dr. M. L. Binder	Dr. R. J. Frank
Dr. F. G. Horne	Dr. W. H. Kretz
Dr. J. T. Myles	Dr. J. M. Quarles
Dr. H. L. Williams	Dr. W. H. Sipe
NORFOLK	
Dr. A. J. Ciccone	Dr. H. W. Creef
Dr. R. D. Evett	Dr. A. B. Frazier
Dr. H. W. Fink	Dr. A. H. Jaffe
Dr. F. T. Given	Dr. H. J. Kanter
Dr. R. M. Kesler	Dr. R. F. Mann
Dr. J. N. King	Dr. F. E. Rowell
Dr. J. S. Kitterman	Dr. A. L. Shelton
Dr. M. M. Miller	Dr. D. E. Sly
Dr. R. A. Morton	
Dr. D. B. Young	
NORTHAMPTON	
Dr. W. S. Burton	Dr. J. R. Mapp
NORTHERN NECK	
Dr. A. B. Gravatt, Jr.	Dr. J. M. Booker
Dr. L .T. Griffith	Dr. J. K. Cunningham
Dr. H. E. Kerr	Dr. J. B. Davis
Dr. P. C. Pearson	Dr. H. W. Goode, Jr.
NORTHERN VIRGINIA	
Dr. F. J. Durcan	Dr. T. C. Iden
Dr. A. A. Futral, Jr.	Dr. F. A. Irani
Dr. J. R. Holsinger	Dr. G. H. Kessler, Jr.
Dr. J. C. Hortenstine	Dr. J. C. Laidlaw
Dr. J. D. Landis	Dr. C. H. Miller
Dr. H. G. White, Jr.	Dr. G. L. Sheppard
Dr. James R. York	
ORANGE	
Dr. H. F. W. Mohrmann	Dr. W. S. Grabeel

Delegates	*Alternates*
PORTSMOUTH	
Dr. E. A. Barham	Dr. L. L. Davis, Jr.
Dr. Neil Callahan	Dr. J. S. Garrison, III
Dr. A. A. Kirk	Dr. W. S. Terry
PRINCE WILLIAM	
Dr. A. E. Conner	Dr. C. K. Hylton
Dr. H. W. Coone	
RICHMOND	
ROANOKE	
Dr. W. W. S. Butler, III	Dr. W. S. Johnson
Dr. G. E. Clapsaddle	Dr. R. E. Pooley
Dr. John Cole, Jr.	Dr. T. E. Strong
Dr. T. E. Donnelly	Dr. J. E. Wheless
Dr. R. L. Keeley	Dr. J. W. Wilks
Dr. D. E. Pierce	Dr. D. R. Williams
Dr. K. D. Tuck	
ROCKBRIDGE	
Dr. O. H. McClung, Jr.	
ROCKINGHAM	
Dr. J. T. Glick, Jr.	Dr. J. E. Gardner
Dr. J. T. Hearn	Dr. W. J. Hotchkiss
SCOTT	
Dr. J. L. Miller	Dr. B. R. Adkins
SOUTHSIDE VIRGINIA	
Dr. E. M. Bane	Dr. W. B. Bishop
Dr. E. D. Baugh, Jr.	Dr. H. H. Braxton
Dr. C. H. Crowder, Jr.	Dr. L. W. Bridgforth
Dr. J. A. Kirkland	Dr. C. W. Coppedge
Dr. R. A. Moore, Jr.	Dr. J. S. Harris
Dr. Simon Russi	Dr. M. L. Lacy, II
Dr. W. A. Shelton	Dr. A. J. Munoz
Dr. J. D. Skaggs	Dr. J. S. Prince
Dr. R. S. Smith	Dr. E. E. Ruhnke, Jr.
Dr. H. M. Snell	Dr. H. M. Tanner, Jr.
Dr. P. W. Squire	Dr. T. A. Walker
Dr. F. C. Sturmer	
Dr. H. M. Tanner, Jr.	
Dr. W. P. Terry	
Dr. S. B. White	
SOUTHWESTERN VIRGINIA	
Dr. F. S. Blanton, Jr.	Dr. W. S. Barton
Dr. T. P. Davis	Dr. L. E. Delap
Dr. L. E. Dunman	Dr. W. C. Elliott
Dr. J. H. Early, Jr.	Dr. P. W. Fant
Dr. R. V. Gailliot	Dr. W. C. Grigsby, Jr.
Dr. J. W. Giesen	Dr. C. C. Hatfield
Dr. G. Q. Gilmer	Dr. P. C. Hendrix
Dr. J. L. Givens	Dr. L. P. Hyde
Dr. J. T. Hulvey	Dr. C. F. Johnston, Jr.
Dr. G. B. Kegley	Dr. M. G. Martin
Dr. C. D. Moore, Jr.	Dr. M. E. Scott
Dr. J. L. Patterson, Jr.	Dr. G. R. Smith, Jr.
Dr. W. B. Waddell	Dr. C. Vuurmans
STUART	
Dr. S. P. Massie	Dr. J. A. Kastretsios
TAZEWELL	
Dr. R. A. Abernathy	Dr. J. M. Peery
TRI-COUNTY	
Dr. R. N. Baylor	Dr. E .C. Joyner
Dr. G. G. Birdsong	Dr. D. J. Longford
Dr. R. G. Edwards	Dr. Roy Mason
Dr. B. F. Jamison	Dr. J. A. Naranjo
VIRGINIA BEACH	
Dr. F. K. McCune	Dr. J. P. Charlton
Dr. R. T. Mosby, Jr.	Dr. F. G. Griffin
Dr. T. J. Wakeman, Jr.	Dr. J. H. Trant, III
WILLIAMSBURG-JAMES CITY	
Dr. H. G. Hager, Jr.	Dr. H. G. Stokes, Jr.
Dr. J. D. Brown, III	Dr. Hoay T. Tan
WISE	
Dr. F. S. Booth	Dr. J. M. Straughan
MCV STUDENT MEDICAL SOCIETY	

Committee Reports

EXECUTIVE VICE-PRESIDENT

There is no easy way to report the events of the past year. So many things have happened that it would be necessary for one to actually have been on the scene each day to truly understand and appreciate those events and their significance. Perhaps we should borrow a phrase from other times and places and refer to these last twelve months as "A Year of Decision". That probably sums it up just as well as it can be done. It has been a year of decision—no doubt about that. Time alone, however, will provide the answers as to whether the decisions which have been made will prove sufficient to bring Virginia physicians safely through the troubled waters of change and uncertainty.

During the past several years, your Executive Vice-President has referred many times to the "future" and the "challenge" which lies ahead. That challenge is now with us and we must heartily agree with Coach George Allen of the Redskins when he says "The future is now". No longer can we entertain ourselves with guessing games about what is likely to happen and what medicine must do to stave off the various threats to its well established methods of delivering medical care to the American people. Suddenly—much too suddenly for most of us—the past, present and future have come together with such impact that the shock waves of bewilderment continue to affect us all.

Ever since the House of Delegates voted last October to adopt the Foundation approach to PSRO and seek HEW endorsement of one PSRO for Virginia, things have really been happening. First of all, HEW turned us down and Virginia was designated a five PSRO State. This necessitated a special meeting of the House of Delegates in April—only the second time in the history of the Society that such a meeting has been held. And what a meeting it was! After an almost day long debate, the House gave the green light to the establishment of a PSRO support center for the State.

Then—in rapid fire order—an application for a support center was submitted to HEW and the Virginia Professional Standards Review Foundation formally organized and chartered. The support center application was approved, a Foundation Director was employed and suddenly PSRO had left its first footprint on Virginia soil. A physicians' group in Northern Virginia has already applied for a PSRO planning contract and it could well be that others in the four remaining geographical areas will soon follow suit.

While all this was transpiring, AMA was having its problems—caused mainly by the turmoil associated with PSRO policy decisions. Its position was clarified, however, when its House of Delegates, on June 26, voted to forego a campaign for repeal and seek instead to obtain certain basic amendments to the PSRO law.

What all this portends for the physician in private practice is still a matter of speculation. One thing is certain, however—the organized side of medicine is being put to the acid test. It must provide the leadership and experience to insure the maximum possible input into the overall PSRO operation. Such input is absolutely necessary if the profession is to exercise the control and supervision which The Medical Society of Virginia has insisted upon from the very beginning.

It would be nice if PSRO were the only problem confronting Virginia physicians. Unfortunately, we are not so blessed. Continuing medical education is competing for its share of the spotlight and the House of Delegates will soon be asked to make a decision concerning a proposed program developed by the Commission on Continuing Medical Education. This Commission, you may recall, was appointed at the request of the House and has more than carried out its assignment. There is no doubt whatever that continuing education will occupy and influence a large part of the physician's professional life from this time forward.

We wish we could present an encouraging report on the malpractice situation—but we cannot. Another increase in professional liability premium rates has been found necessary and the end, unfortunately, is not yet in sight. The truth of the matter is that Virginia is suffering the same anguish as the rest of the Nation—although to a lesser extent. We can assure the membership, however, that the rates it pays under the Society sponsored program are realistic. The Insurance Committee regularly takes a long, hard look at the overall plan and leaves no stone unturned in its efforts to bring you the best program available on today's market.

Suppose we leave the problem areas—at least for the moment—and briefly review the past year from an administrative point of view.

President and Council: It is doubtful that any President has ever taken office with so many matters of importance awaiting his attention as Dr. Martin. At the very outset of his administration, he was informed quite clearly by the House as to what it expected where PSRO and continuing education were concerned. It is to his everlasting credit that he accepted without hesitation the challenge of these difficult tasks and set about to bring Virginia physicians the best and most workable programs that could be developed through hard work and sheer perseverence. Where PSRO was concerned, it required numerous trips to Washington for personal conferences with our Senators and Congressmen—and extremely candid discussions with HEW officials.

The real character of this President was very much in evidence when he refused to give up the struggle after HEW seemingly did a last minute turn around and rejected the Society's request for one Statewide PSRO. Instead, he picked up the pieces of our shattered hopes and went about the job of acquainting Virginia physicians with their options and alternatives. When it became clear that a special session of the House of Delegates was necessary, Dr. Martin requested Council to issue the call and then presented his views—carefully

thought out as always. The House, although divided on the question as one would expect, agreed that the by-laws of the proposed Foundation should be amended in such manner that the Foundation could qualify as a PSRO support center.

The PSRO issue will always be the main point of reference when Dr. Martin's Presidential Year is discussed. Only the years immediately ahead will provide the final answers concerning the decisions we have made to date. But—where courage and dedication are concerned, the past and present are all that one needs to draw obvious conclusions. There is no doubt about it —Dr. Martin has been a strong and courageous President—one who has earned the respect of physicians over the entire State.

Council—like the Society itself—has grown in more ways than one. Its meetings are now attended by approximately 45 members and specially invited participants and guests. This number includes Vice-Councilors, our three medical school Deans, AMA Delegates and Alternates, etc. As a result, its deliberations and decisions have become more widely known and more effective liaison is maintained with the membership at large. In addition to four regular meetings, a special weekend study session was held for the first time in Society history. Although this session is still being evaluated, it seems reasonable to predict that a sum of long range benefits will very probably be the end result.

A special report of Council's actions will, as always, be presented to the House during the Annual Meeting.

Membership: Here is the real success story of the year—told in graphic fashion by the statistical chart which follows:

August 1, 1973			4,420
New Members	493		
Reinstated	32		
Increase		525	
Deaths	47		
Resigned	25		
Dropped	78		
Decrease		150	
Net Increase			375
July 31, 1974			4,795

AMA Membership: Although Virginia is not leading the Nation as it did last year in percentage of AMA membership growth, it is still making progress. Our record over the years has not been good where AMA is concerned and it is difficult to explain why we have only 2,600 AMA members at this time. Sure—none of us agrees with AMA all the time, but something would be wrong if we did. Any time an organization must grapple with controversial matters, it is just bound to incur the displeasure of some. Still—AMA remains the first line of defense for physicians of our Nation and deserves the support of all. If and when our AMA membership tops the 3,000 mark, we will be entitled to a fourth Delegate. This means, of course, that The Medical Society of Virginia will have an additional voice in determining AMA policy.

We take this opportunity to congratulate Dr. Richard E. Palmer on his election as Chairman of the AMA Board of Trustees. This is the first time in modern history that a Virginian has held what is generally considered the most important post in the AMA hierarchy.

Finances: We say it every year—and it gives us great pleasure to say it once again: "Your Society is in excellent financial condition." While it appears that we will have a rather difficult time living within our basic budget, your officers and staff are doing everything possible to see that Society funds are expended as judiciously as possible. The PSRO crisis did bring with it a number of unforeseen expenses but they have been absorbed without difficulty. As always, a detailed auditor's report will be published in the Virginia Medical Monthly following the Annual Meeting and it always tells an interesting story. We urge you to study it carefully.

Personnel: There has been one addition to our staff during the past year—Mrs. Margaret Brown. Should the continuing education program, as proposed by the special Commission, be approved, it will quite likely require two additional staff members. We still do not have a Public Relations Director and Field Man, but are proceeding in this direction very carefully and deliberately. We rather doubt that anyone could have predicted five years ago the almost unbelievable increase in Society activities. It has been quite an experience and the job could not have been done without the "Number One" staff in the Nation. A sincere vote of appreciation goes to Miss Watkins, Mrs. Edmunds, Mrs. Stockmar, Mrs. Hurt, Mrs. Moran, Mrs. Brown, Mr. Moore and Mr. Osburn.

Meetings: There is a lot going on in medicine these days, and your Society has been "where the action is". Let's take a quick look at just a few of the local, State and National meetings attended by Society representatives: AMA House of Delegates (two sessions), AMA Leadership Conference, National Rural Health Conference, National AMPAC Workshop, Conference of State Mental Health Committee Chairmen, Virginia Council on Health and Medical Care, Conference of State Society Presidents, five special sessions on PSRO, Virginia Association of Professions, Professional Convention Management Association, AMA Regional Conference on Medicine and Religion, State 4-H Club awards ceremony, annual meetings of five neighboring state medical societies—and many others.

Headquarters Building: We seem to be living in an age of shortages. First it was the energy crisis—then a shortage of beef—and so on down the line. Well, we also had a shortage at the State headquarters—office space. The problem, however, has been solved—temporarily. Those who have attended meetings in the Conference Room would not know it now. Where there was one —now there are four. That's right—the Conference Room has been made into three offices and a Committee Room—providing the additional office space so badly needed for so long.

It could well be that the headquarters building will eventually have to be enlarged. One solution would be the addition of a second wing—resulting in a T-shaped building. With this possibility in mind, a special build-

ing fund has already been established.

Virginia Medical Monthly: The Virginia Medical Monthly isn't making any money—that's for sure—but it continues to make a lot of friends. The "Monthly" is one of the few publications of its kind which has maintained its size and quality in the face of constantly increasing costs, reduced advertising, etc. Miss Watkins, Managing Editor, and Dr. Harry Warthen, Editor, have always insisted that quality comes first and the publication you receive each month shows how well that policy is being carried out.

What Next? The one thing we haven't mentioned in this brief report is the one thing on everyone's mind these days—National Health Insurance. We hear many opinions and predictions—all of them bad—but the truth is that no one really knows just when the Congress will be asked to vote on the issue. A number of proposals—including Medicredit—are being considered in Committee but what the final plan will look like is anyone's guess.

National Health Insurance is entering the countdown stage at a time when the medical profession is—to say the least—battle weary. But, once again, medicine has no alternative but to rally its forces and do everything possible to see that members of the Congress are accurately informed on the various plans and their probable effect on the delivery of health care. If the National Health Insurance plan is enacted within the next two years it must be a plan with which medicine can live. But, we must do the job now—tomorrow could be too late. As the coach says "The future is now".

Robert I. Howard
Executive Vice President

MEMBERSHIP

Your Society continues to grow at an almost unbelievable rate, and the past twelve months are without equal in the history of the Society. It is with a great amount of satisfaction that we point to a record increase of 493 new members and a new all time high membership of 4,795.

We must say, however, in all candor that we are disappointed in our growth rate where AMA membership is concerned. A Society as large as ours should have at least four members of the AMA House of Delegates. For some reason this is proving to be a most difficult goal to achieve and we can only hope that our efforts during the next twelve months will bring a big improvement.

Your Committee takes great pleasure in nominating our President, Dr. John A. Martin, for honorary active membership in The Medical Society of Virginia. Dr. Martin has brought the Society through a most difficult period of its history and deserves the gratitude of all physicians for a job well done.

Hugh J. Hagan, M.D., *Chairman*
Martin Lerner, M.D.
Gordon G. Nidiffer, M.D.

AMA DELEGATES

The Medical Society of Virginia was well represented at both the 1973 clinical session and 1974 Annual Convention of the American Medical Association. The sessions of the House of Delegates were attended by our three delegates and three alternates.

The June sessions of the House were perhaps the most important in the long history of AMA. These were the sessions in which the controversial issues surrounding PSRO were considered and definitive action taken. One of the resolutions considered was introduced by our Virginia delegation and had to do with educating the public about PSRO and its implications. In all, 25 resolutions on PSRO were introduced—all of which eventually gave way to a substitute resolution spelling out AMA policy.

Because of widespread interest in the resolution finally adopted, we believe it advisable to summarize it here:

1. The Board of Trustees was instructed to direct its efforts toward achieving constructive amendments to the PSRO law and to insure appropriate regulations and directives. It was directed that a special effort be made to amend those sections which pose potential dangers in the areas of confidentiality, malpractice, quality of care, development of norms and the authority of the Secretary of HEW.
2. The Association was urged to continue its effort to achieve legislation permitting the profession to perform peer review in accordance with the profession's philosophy and best interest of the patient.
3. State medical associations which have elected to follow a course of non-participation were not precluded from such a position by the House action. They were, however, urged to develop effective non-PSRO review programs as constructive alternatives to PSRO.
4. The door was left open for future legal and legislative action should it become evident that PSRO, as presently constituted, does in fact adversely affect the quality of patient care or conflict with AMA policy.

PSRO was not the only piece of business considered by the House. Over 192 resolutions and reports came in for their share of attention—covering such subjects as confidentiality of medical records, National Health Insurance, health education and planning, human experimentation, Health Maintenance Organizations, student loans, etc.

If you haven't yet attended a meeting of the AMA House of Delegates, plan to do so as soon as possible. You will come away with a much better understanding of what organized medicine is all about and a deeper appreciation of the tremendous job that AMA is doing for all physicians.

W. Callier Salley, M.D.
William S. Hotchkiss, M.D.
Michael A. Puzak, M.D.

JUDICIAL

During the past year the Special Committee on Constitution and By-Laws has been in the process of an exhaustive review of the constitution and by-laws. Ac-

cordingly, that committee has considered the various ideas for proposed amendments.

Council referred to the Judicial Committee the proposed change in Article VI, Section VI, line 5 from the Norfolk County Medical Society. The Committee feels that the various delegations should be able to decide who is to chair their delegation in a manner which they can accomplish with some degree of ease. Accordingly, we support the language which is being proposed by the Special Committee on Constitution and By-Laws.

Bernard I. Lidman, M.D.
Custis L. Coleman, M.D.
K. K. Wallace, Jr., M.D., *Chairman*

PUBLIC RELATIONS

Your committee, and indeed the entire Society, was saddened by the death of its Chairman, John Wyatt Davis, Jr., M.D. His presence will be missed not only for his many years of faithful service to this committee, the Society, the Virginia Academy of Family Practice, the Virginia Chapter of the American Association of Medical Assistants, but by his many friends, associates, patients, family and community.

The Committee is in the process of obtaining Council approval of the complementary distribution of a first aid chart to all interested groups and persons. This chart, used successfully over the years by the North Carolina Medical Society, has been well received by the public and offers concise medically accepted information for easy reference by the user. The title will show "Distributed by the Committee on Public Relations of The Medical Society of Virginia, 4205 Dover Road, Richmond, Virginia 23221—Additional Copies Available on Request." The piece also bears the notice "Paste on Inside of Medicine Cabinet Door"—to insure easy access to the individual. It is hoped that this flyer will meet with the same degree of success found by the North Carolina Medical Society.

Julian L. Givens, M.D., Chairman of the Rural Health Committee, represented the Society at the 4-H Club Health Award Ceremony in Blacksburg and presented the winners of the Health Category with their certificates and prizes. This PR project continues to be one of the very best since the program enjoys wide media distribution throughout the State, particularly in the rural areas.

Liaison was continued with the Virginia Chapter of the American Association of Medical Assistants. Mr. Osburn and Dr. Davis attended all Board meetings and the Annual Scientific Assembly held at the Ramada Inn, at Virginia Beach. Three articles requesting physician participation for their staffs appeared in the Virginia Medical Monthly and a special mailing to Society members soliciting their support, was accomplished. Again, your office staff members still constitute one of the most effective PR forces to be found anywhere and their involvement in the AAMA can help improve their effectiveness.

Efforts to establish a TEL MED program throughout the State have met with little success. The program consists of a collection of tape recorded health messages which have been carefully selected to help the public to remain healthy, help recognize early signs of illness and help adjust to a serious illness—consists of 3 to 5 minute telephone tapes which are written in a straight forward, easy to understand way. Every tape has been carefully screened by a panel of physicians to insure its accuracy. The program, pioneered by the San Bernardino Medical Society of California, costs in the neighborhood of $50,000 to initiate and unfortunately is out of the reach of the Society and other interested parties at this time. It has been labeled the most effective PR program ever attempted in the past twenty years of those societies which have it in operation.

The Committee would like to salute the efforts of the Medical Societies of Alexandria, Arlington and Fairfax Counties in publishing The Medical Bulletin of Northern Virginia. This excellent medical newspaper is another "first" in the field of communications for these societies. Its editorials, articles, personals and matters of medical interest to the physicians of that area, is truly serving an important service.

Another excellent publication is The Bulletin of the Norfolk County Medical Society. It also is providing a much needed communications link with the membership.

Your State Headquarters office is still receiving an ever increasing number of inquiries from the news media, service organizations and the public for information and speakers. It is hoped that this activity will continue to increase since communications of all types are needed to bring the physician's story and views to the attention of everyone possible. Please call on us at any time if we may be of assistance.

Please remember, that regardless of what PR efforts are initiated by your Committee, you and your office are still the medical profession to the people that count —your patients. Their opinions, multiplied many times over, are the opinions formed of American medical practice and malpractice. We suggest that every physician continue to communicate to patients understandingly and understandably about their illnesses. Communicate with patients on a personal level, which if not done often leads to complaints that doctors are cold and indifferent to their problems. Try to communicate on our tangibly-positive assets and programs, i.e., efforts to solve the manpower crisis, peer review, advances in medicine, physician participation in civic activities, drug abuse, mental health programs, emergency medical services, etc.

Russell D. Evett, M.D.
Harold I. Nemuth, M.D.
Donald S. Thorn, M.D.
Arthur M. Martin, Jr., M.D.
John W. Wilks, M.D.

LIAISON TO VIRGINIA HOSPITAL ASSOCIATION

A very productive meeting was held on January 23, 1974, between your Committee and representatives of the Virginia Hospital Association. As usual, we found our friends in the Hospital Association to be most cooperative and we are, indeed, pleased with the wonder-

ful working relationship we enjoy with this fine organization.

A discussion of the status of The Medical Society of Virginia's plan for PSRO was undertaken and the relationship of the plan to hospitals was discussed. The Executive Director of the VHA briefed the members on activity within the Association related to the development and scheduling of regional workshops on the mechanics involved in the operation of the PSRO. The VHA was interested in cooperating with the Society and the Virginia Medical Records Administrators in the planning of such workshops but wished to research the question prior to committing its resources to any specific program.

Representatives from both organizations reviewed medical and hospital concerns over State and Federal legislative issues. It was recommended that the Society and VHA oppose implementation of the change in the Medicaid regulations advancing the following arguments:

1. Administrative costs of the program will be passed on to the patient.
2. Inadequate numbers of personnel and physicians to effectively implement the regulations.
3. Opening of Pandora's Box. Medicare will be next.
4. Reduction in the time physicians can devote to their patients.
5. The regulations smack of class legislation being applied to one group of patients.
6. Current utilization review practices could accomplish the noisome task without Federal regulations.

Consideration was then given to Medical Staff Appointments with the belief expressed that it is outside the purview of hospitals to require medical staff members to divulge the amount of liability insurance coverage carried by the individual physician and also reveal the name of the insurance carrier.

The Committee learned that the Council of the Society had requested that it discuss the practice employed by some hospitals requiring physicians to delineate their areas of competence by the use of a check-off list. It was the consensus that hospitals would be well advised not to require a check list for members of the medical staff. This was deemed inappropriate, dangerous and self-incriminating to physicians who are already licensed by the Commonwealth to practice medicine and/or surgery within the confines of State law. It was, therefore, moved that the Committee advise that it sees no merit to a check-off list and recommend instead that the hospital credentials committee have an agreement in writing as to the extent of a physician's privileges. The motion was carried.

We feel that a great deal of good is derived from joint meetings with representatives of the Hospital Association and hope that they will be continued. Never has it been more important for our two groups to work and stand together than now.

James Asa Shield, M.D., *Chairman*
Richard F. Clark, M.D.
John T. Myles, M.D.
K. K. Wallace, M.D.
Gerald J. Fisher, M.D.

INSURANCE

Your Committee held one formal meeting during the year and wishes to submit the following report for your interest and information.

Professional Liability: St. Paul representatives presented an excellent slide presentation describing the company's experience over the past five years in Virginia. The figures indicated that Virginia had an unacceptable loss ratio during the five year period averaging 148.79 percent. The permissible loss ratio for St. Paul is 75.4 percent.

In this connection, your Committee agreed with St. Paul that another premium increase averaging 50 percent is justified. We hasten to add, however, that the rate of increase will vary across the State—according to regional experience.

Even with the poor experience the Committee was pleased to learn that Society members are still realizing an 18 or 20 percent savings in premiums. *The Committee unanimously approved the overall 50 percent increase recommended by St. Paul.*

Review of All Society Programs: Mr. Ray Slabaugh, Meidinger & Associates, presented a proposal to study all insurance programs sponsored by the Society. Although no exact cost for the study could be determined, the Society approved the proposal. Mr. Slabaugh will present a cost proposal within the next few weeks which could be in the neighborhood of $3,000.

Workman's Compensation Savings Plan: Mr. Robert Kuhn, representing the Dodson Insurance Company, presented a Workman's Compensation Savings Plan recently approved by a number of state medical associations. He pointed out that physicians in Virginia, having five or more employees, are required to carry Workmen's Compensation, and the rate of 21¢ per $100 payroll was established by the State. It was noted that associations using a similar plan have saved as much as 40 percent of their Workman's Compensation premium. At the end of one year's experience the savings in premiums would be refunded to the Society participants.

Although the Committee took no formal action approving the plan, it did support the mailing of a questionnaire to Society members. A covering letter would point out the advantages of the plan and the questionnaire would indicate whether or not there was sufficient interest from the membership for the Society to endorse such a proposal.

David A. Dyer Insurance Agency: The Committee regretted very much that due to the lack of a quorum it could take no action on several proposals presented by Mr. Dyer. In this connection, Mr. Dyer will present his proposals by letter which will be distributed to Committee members for their consideration.

A. L. Herring, Jr., M.D., *Chairman*

LIAISON TO STATE BAR

The Joint Medico-Legal Plan for Screening Malpractice Cases has heard five cases during the past

twelve months, and only one additional case is scheduled before the Annual Meeting.

Your Committee, over the past several years, has heard an average of fourteen cases per year and is very puzzled that applications for hearings are at an all time low. Maybe the puzzle is not that difficult to solve. Two years ago several major provisions were written into the Plan. The one of most significance was prohibiting the Plaintiff's attorney from filing suit should he receive a negative decision. The Committee feels in all likelihood this is the primary reason for the decline in hearings.

Requests for applications continue but, compared with the number of suits pending or filed in the State, the Panel is hearing only a small fraction.

The Medical Society of Virginia and the Virginia State Bar have done everything possible to publicize the Panel and its purpose. Your Committee is pleased to reiterate its purpose for your interest and information.

The fundamental purposes of this plan are twofold: first, to prevent where possible the filing in court of actions against physicians and their employees for professional malpractice in situations where the facts do not permit at least a reasonable inference of malpractice; and on the other hand, to make possible the fair and equitable disposition of such claims against physicians as are, or reasonably may be, well-founded.

Both professional groups recognize that the mere filing of a malpractice action in court, whatever its merits, could cause substantial harm to the reputation and practice of the physician concerned. Both groups recognize, at the same time, that persons having legitimate and meritorious grievances against physicians have heretofore at times encountered difficulty in substantiating their claims with expert testimony in court.

It is with regret that for the first time since the Panel's existence a somewhat negative report is presented. It is hoped that the next twelve months will show a turn around in the number of cases heard, and that participation by attorneys will once again be somewhat in line with previous years. Should the experience not show a marked increase, the Society may have to look to other means—such as arbitration—in order that it may continue to serve its members in a more effective manner.

George M. Nipe, M.D., *Chairman*

MEDICINE AND RELIGION

Your Committee continues to be most active, and the involvement in various programs seems to grow each year.

The Southeastern Medicine and Religion Regional meeting was held in Atlanta in February, and representatives from ten states attended. Your Committee was represented and felt this was a most outstanding session.

The Committee continues to co-sponsor the annual symposium on medicine held at the Portsmouth Naval Hospital. The last symposium was entitled "Ministers and Physicians as Consultants in Sexual and Marital Health", and the session was exceptionally well attended.

Plans are underway for the sixth symposium scheduled in October, and the main theme will be "Present-day Medical-Moral Questions in the fields of Human Reproduction and Bioethics". An advanced mailing has been sent to our component societies, and it is hoped that a larger number of physicians will attend.

Your Committee is most proud of the fact that the first prayer breakfast, held by the Society during last year's annual meeting, was a tremendous success. There were over seventy in attendance, and due to the large demand for tickets the morning of the breakfast, many had to eat elsewhere and return for the official program.

Although no prayer breakfast is scheduled for this year's annual meeting—due to the Sunday through Wednesday schedule—a program is definite for 1975.

The Committee is very encouraged over the year's activities and is looking forward to a continuing relationship and understanding between physicians and clergymen in their mutual task providing total patient care.

The Chairman would like to take this opportunity to extend his gratitude for the undying efforts of Mr. Jim Moore and staff, because without them his job would be an almost impossible task.

Bernard H. Kasinoff, M.D., *Chairman*

HEALTH CAREERS

The Committee has continued to work with the Health Careers Program of the Virginia Council on Health and Medical Care. The program has been presented to 44,407 students in 202 high schools during the past year. Additional information was requested by 2,576 students, 666 of whom were interested in a career in medicine. The Virginia Council's pamphlet on medicine as a career was revised as were the data in the Council's booklet on health careers. A request was received from the Virginia Council for a movie to be used demonstrating medicine as a professional career. This was forwarded to the Medical Society's President for his consideration.

Recommendation to the House of Delegates

The Committee recommends that The Medical Society of Virginia obtain a suitable movie on medicine as a career and donate it to the Health Careers Program of the Virginia Council of Health and Medical Care for use in its educational programs.

Fred J. Spencer, M.D., *Chairman*
William M. Massie, M.D.
William H. Sipe, M.D.
Sam D. Graham, M.D.

CHILD HEALTH

The Committee on Child Health met once during the past year and wishes to submit the following report for your interest and information.

Tel-Med Tapes:

Dr. Chalkley was very interested in having the Committee brought up to date on the Tel-Med tape project.

It was reported that Blue Cross-Blue Shield was still in the process of investigating the possibilities of supporting such a program, but no further information was available at this time. It was also pointed out the C&P Telephone Company had been contacted, but until more information is available, there is nothing of a concrete nature to report.

It is hoped that in the not too distant future representatives of the company which manufactures the Tel-Med equipment will meet with several representatives of the Society. In this connection, additional information will be available for the next meeting of the Committee.

Register of Child Abuse Cases:

During its last meeting, the Committee discussed the possibility of better communication by setting up a register of child abuse cases. It was mentioned that families frequently move a short distance across state lines, and where child abuse has been present, it might be helpful to have a register of these cases.

Discussed was the fact that at times it is most difficult to obtain the correct name and address of parents, relatives, or guardians where child abuse is involved, and a register would probably be most incomplete and cumbersome in maintaining adequate information. After further discussion the Committee agreed that no action should be taken at this time.

School Health Examination:

The Committee was most interested to learn from Dr. Hunt that the certificate of school health examination had been revised and should be available for distribution within the next thirty days. She went on to say the revision would correct items of concern the Committee expressed during its previous meeting. The new certificate has been designed so that it is applicable for children two to twenty-one years of age, which is now considered school age in Virginia. (A copy of the revised form is enclosed for your interest and information)

Dr. McDonald hoped the certificate would be used by nursery schools and wondered if the possibility had been explored. Dr. Hunt reported that the Welfare Department was most pleased with the new form and would encourage use by nurseries within the State. It was also suggested space be available on the form in order that nurseries could identify their own organization.

The Committee felt some means should be available to make the physicians aware of the certificate, and a motion was made to have the Society include the form with one of its newsletters, and advise the membership where a supply could be obtained. *The motion was seconded and carried.*

Child Abuse and Smallpox Legislation:

Four bills have been introduced in the General Assembly pertaining to Child Abuse Legislation. Two of the bills—HB No. 453 and HB No. 529 were killed, and HB No. 229 and HB No. 416 have been carried over until the 1975 session. The information available at the present time, would indicate the two bills carried over would be placed in the hands of a subcommittee for study, and a new bill introduced next year. There is also a possibility that some sections of the bills that were killed would be considered by the subcommittee.

The Committee was most interested in obtaining the names of individuals that would make up the Committee. This would enable pediatricians to have some input before the bill was drafted. It was pointed out that the nature of injury should be defined in more definite terms, and every effort will be made to have the names of the subcommittee available by the next meeting.

The subject of whether or not smallpox vaccinations should be administered to preschool children has been discussed by the Committee and Council on numerous occasions, and the Society is now on record as opposing mandatory smallpox vaccinations. Although there is still some disagreement among the membership, the proposed legislation would not make the vaccination compulsory and would leave the decision in the hands of the parent and physician.

It was learned that HB No. 391 which would delete the mandatory requirement has passed the House and Senate, although the House has not agreed to the Senate amendments. Dr. Hunt pointed out that the Senate amendment would have smallpox vaccinations revert back to a mandatory status should an epidemic occur. The Committee was in agreement that this amendment was very sound and would have the complete support of all physicians.

Newborn Insurance Model Law:

A newborn model insurance bill approved by the American Academy of Pediatrics was presented by Dr. Chalkley. It was learned that a copy of this bill has been sent to Senator Stanley Walker, and it is hoped that he will work on the bill after the present session of the General Assembly. A copy of the bill reads as follows:

> "All individual and group health insurance policies providing coverage on an expense incurred basis and individual and group service or indemnity type contracts issued by a nonprofit corporation which provide coverage for a family member of the insured or subscriber shall, as to such family members' coverage, also provide that the health insurance benefits applicable for children shall be payable with respect to a newly born child of the insured or subscriber from the moment of birth.
>
> The coverage for newly born children shall consist of coverage of injury or sickness including the necessary care and treatment of medically diagnosed congenital defects and birth abnormalities.
>
> If payment of a specific premium or subscription fee is required to provide coverage for a child, the policy or contract may require that notification of birth of a newly born child and payment of the required premium or fees must be furnished to the insurer or nonprofit service or indemnity corporation within 31 days after the date of birth in order to have the coverage continue beyond such 31 day period.

The requirements of this act shall apply to all insurance policies and subscriber contracts delivered or issued for delivery in this State more than 120 days after the effective date of the act.

This act shall become effective upon ratification but shall only apply to policies of insurance, and hospital service or medical service plan subscriber contracts delivered, issued for delivery, re-issued or renewed in this State on and after July 1, 1975."

After further discussion, the Committee unanimously endorsed the bill and recommended that it go to Council with recommendation that the Society support this legislation when it is introduced.

American Academy of Pediatrics:

It was learned that the Academy was most interested in having The Medical Society of Virginia, through its Executive Vice-President and lobbyist, act in its behalf when legislation of interest and concern to pediatricians is introduced in the Virginia General Assembly. It was the concensus that the wish of the Academy be brought to the attention of Council.

PSRO:

Dr. Chalkley pointed out that the American Academy of Pediatrics Fourth District Committee, has gone on record to support Peer Review in the State. The hope was expressed that our Committee on Child Health would support their action. The plan of The Medical Society of Virginia would have a one State PSRO controlled and administered by physicians. *The Committee unanimously approved this position.*

THOMAS S. CHALKLEY, M.D., *Chairman*

CONSERVATION OF SIGHT

The members of the Committee have been very concerned with the legislative trends in regard to optometry in this State as well as other states of the Union. Their position has been considered carefully in the Virginia Society of Ophthalmology and Otolaryngology. It becomes obvious that the gradual inroads by optometrists into medicine will become more and more a serious concern not only to the Committee on Conservation of Sight but the entire Medical Society of Virginia.

W. CONRAD STONE, M.D., *Chairman*

ETHICS

Your Committee is pleased to report that the past twelve months have been relatively quiet—from the standpoint of medical ethics. Those matters which were brought to the Committee's attention were handled routinely and without difficulty.

In recent weeks, however, the Committee has been requested to state once again the Society's policy with reference to the use of bank (credit) cards in the payment of physicians' fees. The Council, during its meeting of September 14, 1969, adopted the following principles as established by the American Medical Association:

"(1) The county medical society should be satisfied as to the financial and professional integrity of the plan. It should negotiate with the plan sponsors to insure that service charges to the physician are reasonable. It should insist that the plan be open to all physicians on the same terms and that it not exploit or capitalize on physicians' participation in the plan. It should advise the plan that the listing of physicians in directories of participating members is contrary to the ethics of the medical profession.

"(2) The individual physician may not, because of his participation, increase his fee for medical service rendered the patient. He may not use the plan to solicit patients. He may not encourage patients to use the plan. His position must be that he accepts the plan as a convenience to patients who desire to use. Plaques or other devices indicating participation in the plan within the physician's office shall be kept to a discreet and dignified minimum. Plaques, signs, or other devices indicating such participation visible outside the physician's office are unacceptable.

"(3) The use of a bank card in connection with the payment of larger fees—which might normally be paid to the physician in installments—is not to be encouraged. All members of the Association are expected to continue the traditional practice of permitting patients of limited means to pay relatively large fees in installments without interest or carrying charges. Out of respect for the dignity and traditions of the medical profession, the physician may not relieve himself of his obligations 'to render service to humanity, reward or financial gain being a subordinate consideration'."

It should be pointed out that the AMA Judicial Council believes that the method of payment should not be dictated by the physician—but rather is a matter for the individual patient to decide.

It might also be well at this time to comment on use of the word "clinic"—particularly since several inquiries have been received. It is the opinion of the AMA Judicial Council that—

"Under the ethical principles of medicine no use may properly be made of the word clinic that would mislead or deceive the public, or would tend to be a solicitation of patients to the particular group of physicians holding themselves out as a 'clinic'.

"In connection with any definition of the word 'clinic' it should be clear that regardless of how clinic is defined each physician-member of the clinic must act, in his relations with his patients and his colleagues, in accord with all the Principles of Medical Ethics. No physician member of a clinic may permit the clinic to do that which he may not do. Each physician must observe all the Principles of Medical Ethics."

The principles of medical ethics have never been more important than they are today. The world of medicine seemingly becomes more complex with each passing day and only by observing these basic and fundamental

"rules of good conduct" can we effectively keep our profession above and beyond reproach.

Thomas M. Fulcher, M.D., *Chairman*
Howard I. Kruger, M.D.
William H. Higgins, Jr., M.D.

MATERNAL HEALTH

A meeting of the Committee on Maternal Health was held in Richmond on July 12. The initial portion of the meeting was devoted to a discussion of insurance coverage for obstetrical care in Virginia. Dr. Levi Hulley, Mr. C. C. Wilkerson and Mr. Manford Green from Blue Cross-Blue Shield were present. Mr. J. B. Hudson, Jr., representing the Life Insurance Company of Virginia was also in attendance. These gentlemen were present at the Committee's request.

The discussion was a wide ranging one covering all aspects of insurance for maternity patients in Virginia. It was brought out that there was no uniform maternity insurance policy for all maternity subscribers. Most plans in Virginia, whether individual or group, include hospital coverage for normal pregnancy. Abnormal conditions of pregnancy are covered as illnesses. The usual physician delivery fee in most contracts is approximately 40-60% of the usual and customary charge. The average policy pays approximately $125 for hospital delivery care. Prenatal care and postnatal care are not generally covered by insurance in Virginia.

Some problems brought up were:

1. Similar policies pay varying amounts in various parts of the State.
2. There have been several requests for coverage by single females.
3. There are different waiting periods before maternity benefits would be payable, in different policies.
4. People are not well informed about the benefits they do or do not have in their insurance policies in relation to maternity.

It was suggested that the real problem as a result of this insurance dilemma, is that the quality of maternity care in the United States suffers through lack of adequate maternity insurance benefits. Those pregnant patients who may need hospitalization may not get it because of insufficient maternity insurance hospital coverage. This encourages an avoidance of medical care due to the expense that the patient would incur, but can't afford and therefore a poorer quality of maternity care.

The Maternal Health Committee endorses the concept as desirable that maternity benefits be included in health insurance issued within the Commonwealth of Virginia where feasible. They further recommend that in the spirit of informed consumerism, that health insurance providers be required to inform insurance participants in clear terms the extent of their benefits particularly in relation to maternity care.

The Annual Statistical Report on maternal deaths was then presented. It showed a total of 13 maternal deaths during the calendar year 1973 for the rate of 1.8 per 10,000 live births, one of the lowest in Virginia's history. Of these deaths, 3 were related to ectopic pregnancies, 2 to preclampsia, 3 to abortion, 2 to infection, 1 to abruptio placenta, 1 to ruptured uterus and 1 to pulmonary embolus. There were 72,300 births in 1973.

To further place the maternal deaths for 1973 in perspective, of all maternal deaths between 1969 and 1973, which numbered 75, 23 (30.7%) were related to hemorrhage, 13 (17.3%) were related to toxemia, 14 (18.7%) were related to abortion, 12 (16%) were related to embolism, and 4 (5.3%) were related to infection. The other 9 (12%) were related to various miscellaneous causes.

To give added emphasis to the concept of early prenatal care, the Medical Society, through the suggestion of the Maternal Health Committee, partially sponsored T.V. promotional spot advertisements to endorse the concept of early prenatal care. The viewer was encouraged to send for a free pamphlet called "Be Good To Your Baby Before It Is Born." Between August, 1971, and April, 1974, one thousand nine hundred sixty-three booklets were requested. It is hoped that this optimistic response will be translated into earlier prenatal care for the pregnant women of the Commonwealth.

The Committee next dealt with a series of topics on which an opinion had been requested.

In relation to House Joint Resolution 144, which memorializes the Congress of The United States to propose an amendment to The Constitution of The United States to effectuate protection of unborn humans, it was suggested that the resolution be circulated to the entire Committee for their written approval or disapproval.

In relation to House Bill 792, which proposes to amend The Code of Virginia by establishing conditions when abortion may be permitted in each trimester of pregnancy, proposes restrictions of certain types of abortion and includes a conscience clause to excuse hospitals and medically related personnel from abortion activities if they wish. This bill also repeals §§ 18.1-62, 18.1-62.1, 18.1-62.2, 18.1-62.3 and 18.1-63. This is a very complicated bill, and it was decided that it would be discussed with Mr. Miller, who is the Medical Society legal representative. Other medical and legal opinion would be sought as needed.

In relation to House Joint Resolution 43, which directs the State Board of Medicine and Nursing to permit the Health Department to utilize family planning nurse practitioners under direction of supervising physicians, it was decided that meetings with the Board of Nursing and the Board of Medicine should be arranged to discuss this bill.

These three items will be completely discussed and final action will be taken by the Committee before the annual meeting of the Medical Society in November of this year.

The Maternal Health Committee was asked to express an opinion on the proposed formation of a "Family Life and Family Planning Committee" within the Medical Society. The Maternal Health Committee was in favor of establishing such a body. It was felt that the members should include a pediatrician, an obstetrician, a psychiatrist, a family practitioner, a Virginia Ob-Gyn Society member, a member of the Medical Advisory

Board of Planned Parenthood, and a Health Department Ob-Gyn representative.

The last item of business was to refurnish Committee ranks, to take into account recent resignations and expired terms of membership.

Leo J. Dunn, M.D., *Chairman*
Harold D. Gabel, M.D., *Secretary*
William N. Thornton, Jr., M.D.
Frank G. Turner, M.D.
Francis R. Payne, Jr., M.D.
Rufus P. Ellett, Jr., M.D.
Claude A. Smith, M.D.
Theron H. Haas, M.D.
William L. Driskill, M.D.
Herbert A. Claiborne, Jr., M.D.
Charles B. Marshall, M.D.
Thomas P. Caine, Jr., M.D.

CONSTITUTION AND BY-LAWS

During the past year the Special Committee on Constitution and By-Laws has met several times. We have made a thorough study of the existing instruments. We have considered all proposed amendments and suggestions which have been presented to us. We have received advice regarding the statutes as they apply to an organization such as The Medical Society of Virginia. We have considered the thoughts presented at the Retreat Meeting of Council.

We offer to the Society for its consideration a series of amendments which represents a thorough revision of the Constitution and By-Laws. It is hoped that these changes will provide for more efficient function of the Society with simpler language and structure. Notable changes include, but are not limited to: certain deletions allowing flexibility in the meetings; provision for Council and the House of Delegates to convene themselves; combining the laws of the Society into a single instrument, the By-Laws; and substantial revision of the Committee structure.

In addition to recommending the following changes the Committee wishes to recommend that the new instrument, when acted upon, be published in a numbered line format.

Further, the Committee recommends that the House of Delegates call for a special committee to study the role of component societies and make recommendations regarding the required activities, representation in the House and Council, relations with The Medical Society of Virginia, and other appropriate considerations.

There were many suggestions for revision which the Committee considered upon which it was decided to make no recommendation. We were offered several fine ideas which may well have future application. We urge the proponents of such ideas to refine them and seek support for their acceptance.

The Committee wishes to thank President Martin and President-Elect Hill for their participation in our deliberations. We are also grateful for the assistance of Mr. Miller, General Counsel of The Medical Society of Virginia. We are indebted to Executive Vice-President Howard for his wise counsel regarding the logistical feasibility of many ideas. We wish to thank him, together with Mr. Moore and Mr. Osburn of the Society Staff for invaluable time and support.

The proposed revision of the By-Laws follows:

BY-LAWS

ARTICLE I—Title

The name of this organization shall be The Medical Society of Virginia. The words "the Society" or "this Society" in the By-Laws shall be construed to mean "The Medical Society of Virginia".

ARTICLE II—Purposes

The purposes of this Society are to promote the science and art of medicine, the protection of public health, and the betterment of the medical profession.

ARTICLE III—Membership in the Society

Section 1—Physicians and medical students in Virginia, members of a component society, shall be eligible for active membership. Provision may be made for associate membership and for active membership by medical students. As used herein, the word physician means doctor of medicine or doctor of osteopathy.

Section 2—Members of the Society are classified as active, associate, courtesy, student active, honorary active, and honorary associate. Active and honorary active membership is based upon membership in a component society. Student active membership is based upon membership in a component student society.

Members in good standing in component societies are eligible for active membership in the Society. Physicians in good standing in any county or city in which there is no component society, provided they meet all the requirements of the State Society from such county or city, are also eligible for such membership. As it applies to the By-Laws, the word physician means doctor of medicine or doctor of osteopathy.

Members in good standing in component student societies are eligible for student active membership in the Society. Student active membership terminates when the member graduates or his enrollment in the medical school terminates.

Active members who move out of the State may become associate members of the Society. Teachers of sciences allied to medicine and medical officers of the Army, Navy and Public Health Service, temporarily stationed in Virginia, and physicians attached to Veterans Hospitals, may be elected to associate membership through component societies, or by the Membership Committee. Associate members may resign membership by giving notice to the Executive Vice President, or, on recommendation of the Ethics Committee, be suspended or expelled by the House of Delegates for sufficient cause. Any associate member, eligible to membership in a component society, may be required by the Council to make application for membership in such component society.

Physicians serving internships, residencies and fellowships in approved hospitals may be elected to courtesy membership.

Section 3—No one shall be enrolled as an active or associate member of this Society until the Executive Vice-President has received his or her prorated annual dues.

Section 4—The privilege of holding office, and serving on standing committees, is limited to active and honorary active membership, who, together with student active members, and no others, shall have the right to vote. In all other respects the status of the active, associate, courtesy, student active, honorary active and honorary associate members is the same.

Section 5—For long, faithful or distinguished service, the House of Delegates, upon recommendation of the Membership Committee, may elect annually two resident members and one non-resident physician to honorary active or honorary associate membership.

Section 6—Every member, after verification of good standing from the rolls, shall register and be given a membership badge before taking part in any of the proceedings of the annual session. All badges shall be furnished by the Society.

ARTICLE IV—Funds

(A)

Funds for the Society may be raised by a per capita assessment, voluntary contributions and other business activities. The funds shall be expended to carry out the general purposes of the Society.

(B)

Section 1—Membership dues, by amount and by category of membership to which such amounts are applicable shall be determined by the House of Delegates for the next fiscal year. A recommendation regarding such dues shall be presented by the Council to the House of Delegates at each annual meeting and may be adopted, or amended, by the House of Delegates by a majority vote. If no recommendation is made by Council or no action taken by the House of Delegates, the dues applicable during the preceding fiscal year shall remain in effect.

Section 2—The fiscal year of the Society for membership shall correspond with the calendar year.

Section 3—Student active, honorary active, and honorary associate members shall be exempted from the payment of annual dues, and the President, in his discretion, may extend this exemption to other deserving members. Any member over seventy (70) years of age shall be exempted by the Executive Vice-President provided he has been a member in good standing for the previous ten years.

Section 4—The Executive Vice-President is charged with the duty of collecting or adjusting past due per capita assessments, after conference with the President, and, if necessary, the Councilor of the District in which the member in arrears resides. A member, whose dues are six months in arrears, shall be dropped automatically from the rolls of the Society. Should such member later apply for membership, his application shall be accompanied by twenty dollars in addition to the dues of the current year.

ARTICLE V—Component Societies

A component society shall be made up of physicians from one or more political subdivisions of the State of Virginia. As used in the By-Laws the term "political subdivision" means a county or city of the State.

Component student societies shall be made up of students in medical schools approved by the American Medical Association.

The by-laws of these societies shall be in conformity with these by-laws and the Principles of Medical Ethics of the American Medical Association shall govern the members of component societies, and, to the extent applicable, shall govern members of component student societies.

Section 1—The component societies and component student societies shall be those holding charters from the Society.

Section 2—There shall be only one component society in a county or city, and no component society may be established in a territorial area included in the jurisdiction of another component society; provided, however, that if two or more political subdivisions shall, by merger, annexation, or otherwise, become a single political subdivision, any component societies in the said political subdivisions may continue as separate component societies, or any number of them may unite to form a single component society.

Section 3—When a component society qualifies, it may obtain a charter upon application to the Executive Vice-President, which charter shall be signed by the President and the Executive Vice-President upon approval by Council.

Section 4—Should it seem desirable that a component society in one or more political subdivisions in a Congressional District unite with a component society in one or more political subdivisions in an adjoining Congressional District as a single component society, or should it seem desirable that physicians having the major portion of their practice in one or more political subdivisions in a Congressional District, in which political subdivision there is no component society, and physicians having the major portion of their practice in one or more political subdivisions in an adjoining Congressional District, in which political subdivision there is no component society, unite to form a single component society, such action may be taken, provided it is sanctioned by the Councilor from each of such Districts. Such component society shall be deemed to be in the jurisdiction of the Councilor of the Congressional District in which the majority of its membership have the major portion of their practice.

In the event a member belongs to a society composed of physicians from adjoining Congressional Districts, he may vote for members of the House of Delegates, and be counted as a member of the Society in the Congres-

sional District in which the majority of its members have the major portion of their practice.

Section 5—There may be not more than one component student society at each medical school approved by the American Medical Association, such component student society to be composed of first, second, third and fourth year students in good standing. When a component student society, consisting of at least 15% of the eligible students qualifies, it may obtain a charter upon application to the Executive Vice-President, which charter shall be signed by the President and the Executive Vice-President.

Section 6—A component society consisting of more than one political subdivision may, upon petition to the Council, be divided and given separate charters if the Council is of the opinion that such division is in the interest of medical organization.

Section 7—A physician shall not be eligible to join a component society other than a component society which is in the political subdivision in which he carries on the major portion of his practice, except that if a physician practices both in Virginia and in an adjoining state or the District of Columbia, and the major portion of his practice is not in Virginia, he may join a component society in the political subdivision in which he resides. In all other respects each component society shall judge the qualifications of its members. This section is subject to the provisions of Section 10 of this article.

Section 8—A component society shall drop from its roll a member whose license to practice medicine in the State has been revoked or whose membership in the State Society has been lost on account of misconduct.

A component student society shall drop from its roll a member whose membership in the State Society has been lost on account of misconduct.

Section 9—A member expelled by a component society or by a component student society can appeal to the State Society through the Ethics Committee.

Section 10—A member may join a more convenient component society in the same or an adjoining political subdivision if the component society, or societies, having jurisdiction in the county or city in which he carries on the major portion of his practice gives consent, or may join a component society in an adjoining political subdivision if there be no component society in the political subdivision in which he carries on the major portion of his practice.

Section 11—Each component society and each component student society shall send to each annual meeting of the Society its number of delegates and alternates fixed by Article VII, Section 3, of the By-Laws.

Section 12—The secretary of each component society and of each component student society shall keep a roster of its members. Such roster shall include, for the component society, name, address, year of graduation, college, and date of State license, and, for the component student society, name, address, class or expected year of graduation, and college, and all such rosters shall include such other information as may be desired by the Society. Once a year, not later than July 1st, the secretary of each component society and of each component student society shall send a list of its members to the Executive Vice-President of the State Society.

Section 13—The component societies and the component student societies shall cooperate with the officers of the State Society to carry out the plans, laws and purposes of this organization, and to this end shall meet at least twice each year and shall send minutes of meetings and such reports as may be required by Society policy.

Section 14—If a component society fails to comply with the provisions of these by-laws then Council shall request a report of the Membership Committee regarding the status of the component society in question. Council, after receiving such report, may then recommend revocation of the Charter of that component society.

ARTICLE VI—General Meeting

Section 1—There shall be an annual session of the Society and the date and place of the meeting shall be determined by Council.

Section 2—The general meetings of the Society are open to all registered members and guests.

Section 3—At each annual meeting the President may at his discretion make a presidential address.

Section 4—The Committee on Program and Exhibits shall establish the rules and regulations under which contributions shall be made to the programs of the Society, including the time limitations upon papers and discussions.

Section 5—Except as otherwise specifically provided by the Committee on Program and Exhibits, papers and contributions are the property of the Society and no publication or other use shall be made of them without the consent of the Editorial Board.

Section 6—A rule governing the program or conduct of a general meeting may be changed only by a two-thirds vote of the members present.

ARTICLE VII—House of Delegates

Section 1—The House of Delegates shall be the business and legislative body of the Society, and its membership shall consist of the delegates elected by the component societies and any component student societies chartered by the Society, the President, President-Elect, First Vice-President, members of the Council, Past-Presidents of the Society, officers of the American Medical Association who are members of the Society, and delegates of the Society to the American Medical Association. The Speaker of the House of Delegates shall be an ex-officio member and the presiding officer of the House of Delegates, but shall vote only in the case of

a tie. He shall appoint all special committees whose duties are concerned primarily with the operation and functioning of the House of Delegates.

Section 2—The first assembly of the House of Delegates shall be held on the first day named for the annual session. Subsequent meetings shall be held at hours which will not conflict with the scientific program. If possible, reports of committees and of the Executive Vice-President shall be published in the official publication of the Society prior to the annual session. These reports may be discussed and amended by the House of Delegates. As the first order of business at each annual session, the House of Delegates shall adopt Rules of Procedure to govern the conduct of business during the session.

Section 3—Each component society may elect annually to membership in the House of Delegates, one delegate and one alternate for each thirty-five (35) or major fraction thereof of its members who are members of The Medical Society of Virginia; or, in its discretion, a component society may elect one delegate and one alternate from each county and each city in its territorial area. In any event, each component society is entitled to at least one delegate and one alternate in the House of Delegates. If the full number of delegates accredited to a component society are not present at the meeting of the State Society, those members present from such component society shall, from members of that society present, elect or appoint a sufficient number of delegates to complete its quota. Delegates and alternates shall be active members or student active members of The Medical Society of Virginia.

In the event a member of a component society, authorized to vote therein, is also a member of another component society in which he is authorized to vote, he may vote for members of the House of Delegates and be a candidate for election to the House of Delegates only in the Society established in the territorial area in which he carries on the major portion of his practice, and in the numerical apportionment of membership in the House of Delegates, he shall not be counted as a member of any component society except the one established in the territorial area in which he carries on the major portion of his practice, except that, if he practices both in Virginia and in an adjoining state or the District of Columbia, he may vote for members of the House of Delegates and be a candidate for election to the House of Delegates in, and be counted as a member of, the society established in the territorial area in which he resides.

Each component student society may elect annually to the membership in the House of Delegates two delegates and two alternates. If both of the two delegates accredited to a component student society are not present at the meeting of the State Society, those members present for such component society shall, from members of that society present, elect or appoint one or two delegates as may be necessary to complete its quota. Student active members, their component student society, and the delegates from the component student society shall be considered members, societies, and delegates of the territorial area in which is located the medical school with which they are affiliated.

Section 4—Thirty (30) delegates representing at least ten (10) component societies shall constitute a quorum of the House of Delegates.

Section 5—The Speaker of the House of Delegates shall preside over the meetings of the House of Delegates. The Executive Vice-President shall be the Secretary.

Section 6—The House of Delegates shall elect officers of this Society as provided for in Article VIII of the By-Laws.

Section 7—The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that organization. Except where the number of nominees does not exceed the number of delegates to be elected, such delegates shall be elected by ballot, and each member shall be allowed to vote for as many of the nominees as there are delegates to be elected. Those receiving the highest number of votes will be declared elected as delegates. Following the election of delegates, alternates shall be elected, and except where the number of nominees does not exceed the number of alternates to be elected, such alternates shall be elected by ballot, and each member shall be allowed to vote for as many of the nominees as there are alternates to be elected. Those receiving the highest number of votes will be declared elected as alternates.

Section 8—The House of Delegates shall nominate to the Governor of Virginia, at the proper time in accordance with the laws of Virginia, members of The Virginia State Board of Medicine.

Section 9—The House of Delegates, at each annual session, shall have authority to approve, modify or reject the budget recommendations presented by the Council for the ensuing fiscal year. In case a budget is not presented by the Council, the House of Delegates shall have authority to prepare the budget.

Section 10—The House of Delegates may revoke the charter of a component society or component student society for violation of the laws of the Society, for lack of membership, or for failure to send a delegate to the Annual Meeting for three (3) consecutive years.

Section 11—The Executive Vice-President shall make a complete yearly report to the House of Delegates at each annual session.

Section 12—The Council may call a special meeting of the House of Delegates when in its opinion such meeting is necessary or desirable and shall call such a meeting upon petition of elected Delegates to the number of at least one-third the elected Delegate membership. Written notice stating the place, day and hour of the meeting and the purpose or purposes for which the meeting is called shall be given not less than ten (10) or more than fifty (50) days before the date of the meeting, either

personally or by mail, by or at the direction of the President or Executive Vice-President, to each member of the House of Delegates serving or who was authorized to serve at the last regular meeting of the House of Delegates. In the event any such member has died or otherwise become ineligible to serve, then another member may be elected or appointed to serve in his stead. At any such special meeting the House of Delegates so constituted shall have the same power and authority as to the matters for which the meeting was called as if meeting in annual session.

ARTICLE VIII—Election of Officers

Section 1—The House of Delegates, at its first meeting, shall elect from its membership a Committee on Nominations, consisting of one member from each Congressional District who shall be nominated by the Delegates present from that District and, in event a district is not represented in the meeting, such nomination shall be made by the Speaker. This committee shall report to the House of Delegates the result of its deliberations in the form of a ticket containing the names of one or more members for each of the officers to be filled at the annual session. Nothing in this section shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates. Except where there is only one nominee for an office, the election of officers shall be by ballot, and a majority vote shall be necessary for election. The lowest nominee will be dropped on each ballot until one receives a majority vote. In case of a tie, the Speaker shall cast the deciding vote.

Section 2—Only active members and honorary active members, in good standing, are eligible to office.

Section 3—The House of Delegates shall at each annual session elect a President-Elect for a term of one year. At the end of this term, the President-Elect shall automatically become President for a term of one year.

Section 4—The House of Delegates shall at each annual session elect a First Vice-President, a Second Vice-President, and a Third Vice-President, to rank accordingly, these as far as possible to represent the various sections of the State. The House of Delegates shall also elect a Speaker and Vice-Speaker. In the event of a vacancy occurring in the office of Speaker or Vice-Speaker the President shall appoint a successor to serve through the next annual meeting. The Vice-Speaker shall preside over the House of Delegates in the absence of the Speaker, or at the Speaker's request, and in either instance the Vice-Speaker shall have all the rights and privileges of the Speaker. The term of office for each of the foregoing officers shall be one year.

Section 5—The House of Delegates shall at each annual session elect an Executive Vice-President for a term of one year. The Executive Vice-President may be a non-member.

Section 6—Councilors shall be elected at the annual meeting for a term of two (2) years, those from odd numbered Congressional Districts on odd years, and those from even numbered Congressional Districts on even years. At the first meeting of the House of Delegates, each district shall submit to the Speaker the name of the chairman of the delegation, whose duty it shall be (1) to secure a list of qualified delegates from his district, (2) to designate a time and place for their meeting, and (3) to report their nomination for Councilor to the succeeding meeting of the House of Delegates. No Councilor who is eligible for re-election shall attend the meeting of his District. Should there be a vacancy in the membership of the Council and the District was not represented in the meeting, the House of Delegates, on nomination by the Speaker, shall elect a Councilor for that district.

A Councilor who has served three (3) consecutive terms shall not be eligible to succeed himself. He may be re-elected, however, after being out of office for at least one year.

A Vice-Councilor shall be elected annually at the Annual Meeting from each Congressional District and in the same manner of selection as the Councilor. He may serve no more than two (2) consecutive terms. His duty is to assist his Councilor in any way requested and to substitute for him when the Councilor is unable to perform his official Society duties.

Section 7—The officers shall begin service at the adjournment of the annual session and continue until the end of that term, or until a successor qualifies.

Section 8—In case there is a vacancy in the office of President-Elect, or in case the President-Elect was appointed pro tempore by the Council, the House of Delegates at the annual session shall also elect a President for the following term.

ARTICLE IX—Officers

A. President

Section 1—The President shall be the executive head of the Society.

Section 2—The President shall be the presiding officer at the general meetings of the Society, a member of the House of Delegates, chairman of the Council, and ex-officio member of all committees. The President shall vote in meetings of the House of Delegates, but shall vote in the general meetings and in the Council only in the case of a tie. If the President or the President-Elect cannot be present, a Vice-President shall preside over the general meetings, the Council or special scientific sessions.

Section 3—After conference with the chairman of the Committee on Program and Exhibits, the President may invite guest speakers for the annual session.

Section 4—The President shall fill any vacancy occurring between annual sessions in the Council and standing committees, and such appointment shall be valid until the end of the next annual session, except that when the apportionment of delegates to the American Medical Association is increased the delegates and alternates

selected to fill the new vacancies shall assume office immediately after their selection and serve during that calendar year. He shall appoint any necessary special committees at the time he takes office, or during the year.

Section 5—The President shall visit as many of the component societies of the State Society as possible during the year, in the interest of the Society, actual expenses incurred being paid in accordance with budget determined upon by the House of Delegates.

B. President-Elect

Section 6—The President-Elect shall be a member of the House of Delegates, Council and the Finance and Budget Committee. The President-Elect shall act for the President in his absence or temporary disability, and shall automatically succeed to the presidency at the end of the term.

Section 7—The President-Elect, at the annual session when he assumes the office of President, shall appoint one member in place of the retiring member on each standing committee and shall name the chairman of the standing committees for the ensuing year. The President-Elect shall make every effort to name all committees and appoint all committee members by September 1, but special committees may be named and members appointed at any time. Announcement of these names shall be made at the general meeting when he assumes office.

C. Vice-Presidents

Section 8—The Vice-President shall assist the President in the discharge of his duties and the Councilors in their districts in the organization of component societies. In event of the permanent disability, death or resignation of the President, a Vice-President, according to rank, shall succeed him for the remainder of his term of office.

D. Executive Vice-President

Section 9—The Executive Vice-President of the Society shall be the executive agent of the Society, the secretary of the general meetings, secretary of the House of Delegates, secretary of the Council, and general manager of the official publication of the Society, and shall serve as Secretary and as Treasurer of this Society.

Section 10—The Executive Vice-President shall be the custodian of all property of the Society, provide for registration of members at general meetings, conduct the general correspondence of the Society, and, with the consent of the President, employ necessary assistance.

Section 11—The Executive Vice-President shall collect all money due the Society and pay out these funds upon written order of the President, or upon his designated authority. The Executive Vice-President shall be bonded as approved by the Council.

Section 12—At a time designated by the Committee on Program and Exhibits the Executive Vice-President shall mail notices to members, asking for papers and shall, under the direction of the Committee on Program and Exhibits, prepare and send to each member a program of the annual session.

Section 13—The Executive Vice-President shall keep minutes of all meetings of the Council and House of Delegates. He shall make a general report to the House of Delegates at each annual session.

ARTICLE X—Council

Section 1—The Council shall serve as the Board of Directors of the Corporation and shall have charge of the affairs of the Society when the House of Delegates is not in session.

The Council shall consist of one member from each Congressional District of the State, together with the President, President-Elect, First Vice-President, the Immediate Past-President, the Speaker, or in his absence, the Vice-Speaker of the House of Delegates. The Editor and the State Health Commissioner shall be ex-officio members without vote.

Each Councilor and Vice-Councilor who represent a Congressional District must reside in and/or conduct the major part of their practice in the Congressional District they represent. The President shall be the chairman of the Council and the Executive Vice-President shall be its secretary.

Section 2—An executive committee of the Council composed of three members shall be appointed annually by the President. This committee shall act in an advisory capacity to the President in those matters in which the advice of the Council is desired, but which are not of sufficient importance to warrant calling a meeting of the full Council.

Section 3—Each Councilor shall be the organizer and advisor for his District. Each Councilor may visit each component society in his District once a year either on invitation or as may be necessary.

Section 4—Meetings of Council shall be held upon call of the Executive Vice-President at the request of the President of the Society or any five (5) members of Council, upon reasonable notice. Four members of the Council together with the President or First Vice-President shall make a quorum. Actual expenses may be paid members attending meetings of the Council in the interim between the annual sessions.

Section 5—At each annual session, the Council shall present a budget for the next fiscal year, based on the expected income and expenditures during this period, which budget shall be presented to the House of Delegates for its action.

Section 6—The Council shall be charged with the duty of organizing the whole State into component societies, and, at each annual session, shall report on this work to the House of Delegates, with recommendations. The Council shall also be charged with the duty of organizing component student societies. The Council shall recommend to the House of Delegates the revocation of a charter of a component society or component student society when such component society or component

student society flagrantly violates the rules of the Society.

Section 7—The Council shall provide offices for the Society headquarters.

Section 8—Each Congressional District may have a District Council composed of members from each county and city in the District, the Councilor of that District to act as chairman. The purpose of these District Councils is to bring the individual physicians of the counties and cities of the District into closer contact with the Society and its needs. Members of the District Council representing local medical societies, shall be elected by the membership of the respective societies prior to September 30, and members for counties and cities in which there is no society shall be appointed by the Councilor for their Congressional District, prior to that date. The term of office for members of the District Council shall be one (1) year, ending September 30. They shall be eligible to succeed themselves and their duties shall be to work with and under the direction of the Councilor for the District.

ARTICLE XI—Committees

A. Standing Committees

The Standing Committees of the Society shall consist of an Editorial Board for the official publication of the Society, and additional committees as hereinafter set forth.

Except as otherwise provided, each of the Standing Committees shall consist of three (3) members, whose term of office shall be three (3) years. Successors to the members who have first been appointed for one, two or three years shall be appointed for three (3) years by the incoming President who shall also name the chairman of each committee, and shall appoint persons to fill vacancies on committees for the unexpired terms.

All committees shall make reports annually to the House of Delegates. The chairmen of all standing or special committees shall have the privilege of the floor when reporting to the House or in any incidental discussions.

Actual expenses of members of such committees required to do official work in the interim between annual sessions may be paid upon the recommendation of the chairman of such committees and the endorsement of the President, if presented within thirty (30) days after the meeting, provided budget allowance be made for such purpose in accordance with Article X, Section 4.

All unexpended balances of any fund authorized in the budget shall on or before September 30th of each year revert to the general treasury.

Editorial Board

Section 1—The Editorial Board shall consist of nine (9) members, appointed by the President at the annual session at which he assumes the office of President. The members of the Board shall be appointed as follows: three (3) for one year, three (3) for two years, and three (3) for three years, and their successors shall be appointed for terms of three (3) years each. Any vacancy on the Board shall be filled by the President for the unexpired term. The Board shall conduct the affairs of the official publication of the Society in accordance with the expressed policy of the Society and its budget for the current year.

The President shall appoint an Editor for the official publication of the Society for the ensuing year, such appointment to be made upon recommendation of the Editorial Board, but the President shall not be required to appoint the person so recommended. The Editor may attend the meetings of the Council and the House of Delegates, and shall have the privilege of the floor in these bodies.

Program and Exhibits

Section 2—The Committee on Program and Exhibits shall have charge of the scientific program and scientific exhibits for the annual sessions, in cooperation with the President. The Committee shall endeavor to stimulate interest in scientific and research work among the members of the Society, and may institute appropriate methods to this end.

Legislative

Section 3(a)—The Legislative Committee shall be appointed annually to serve at the pleasure of the President and shall consist of not more than fifteen (15) members, with at least one(1) member from each Congressional District.

(b)—The Legislative Committee shall endeavor to secure and enforce legislation in the interest of public health, scientific medicine, and the moral, social, fraternal, and ethical betterment of the medical profession in the State.

Membership

Section 4—The Committee on Membership shall pass upon the application for membership of those not members of a component society and make recommendations for honorary membership. The Committee shall also, through cooperation with component societies and the Executive Vice-President, prepare proper obituaries for deceased members. The Committee shall have the responsibility for recruiting members into the Society and into the American Medical Association.

Ethics

Section 5—The Committee on Ethics shall consider all matters involving ethics and conduct of members on appeal from the component or component student societies and may act independently in cases not under the jurisdiction of a component or component student society.

All charges against any member shall be in writing, specifically stated, and signed by the accuser. The individual accused and under investigation shall be entitled to a personal hearing or representation. No charge against a member shall be heard by the House of Delegates, unless it has first been referred to the Committee on Ethics.

No motion or discussion of expulsion, suspension or other censure of any member shall be allowed unless such member shall have been given two months' notice through the Committee on Ethics. The Committee shall

make its report to the House of Delegates at the first meeting during the annual session.

No member shall be expelled from the State Society except by a vote of three-fourths of the members of the House of Delegates present. Should the member come forward within twelve (12) months succeeding his or her expulsion and offer satisfactory explanation, he or she may be reinstated, provided three-fourths of those present in the House of Delegates concur.

By-Laws

Section 6—The Committee shall have the responsibility to consider all proposed by-laws changes, to review the by-laws annually, and to make a comprehensive review of the by-laws every five (5) years. The Committee shall suggest necessary revisions and interpret its provisions in case of conflict or doubt as to specific meaning.

Public Relations

Section 7(a)—The Committee shall consist of six (6) members whose term of office shall be for three (3) years, two (2) to be appointed annually by the President.

(b)—The Committee on Public Relations shall supervise all the Society's undertakings in the field of Public Relations.

Grievance

Section 8(a)—The Committee on Grievance shall be composed of the latest five (5) active Past-Presidents of the Society, the chairman to be appointed from among this number by the President of the Society.

(b)—The Committee shall review problems or misunderstandings arising between doctors and patients. Any three (3) members of the Committee may be designated by the chairman to act as the reviewing panel to hear a particular case.

Charges shall be submitted to the chairman of the Grievance Committee in writing. The Committee shall have jurisdiction of all cases which are appealed from decisions of grievance committees of component or component student societies. It shall also have jurisdiction of all cases of alleged grievances originating in areas in which there is no functioning component or component student society, and in instances where no grievance committee of a component or student component society has been appointed, or if appointed fails to function.

The chairman shall call a meeting of the Grievance Committee at his discretion or upon written request of any three (3) members of the Committee. Three (3) members shall constitute a quorum for the transaction of business or the hearing of cases. The time and place of the meeting shall be designated by the chairman. Hearings shall be conducted in private with both the complainant and the defendant present, and both shall have the privilege of counsel if either or both so elect. Previous written notice, mailed by registered, return receipt letter, shall be sent both parties at least fifteen (15) days in advance of the meeting date, designating the time and place of the meeting. A panel committee of at least three (3) members of the Grievance Committee shall be required for hearings. The complainant, the defendant, and the chairman of the Grievance Committee shall have the right to summon witnesses. If both the claimant and the defendant so elect in writing, the hearing may be based entirely on the written allegation of fault, and the written defense.

Decisions of the Grievance Committee shall be by two-thirds vote. The decision shall determine the guilt or innocence of the accused and, if guilty, shall reprimand the offender. If indicated by the seriousness of the situation or practices involved, the case shall be referred to the Ethics Committee for appropriate action.

The Grievance Committee shall have authority to evolve its own rules of procedure. Expenses of the Grievance Committee incurred in the performance of the duties herein outlined shall be paid out of the general funds of The Medical Society of Virginia. Expense accounts shall be submitted by the chairman of the Committee to the Treasurer of The Medical Society of Virginia.

Finance

Section 9(a)—The Committee on Finance shall consist of three (3) members whose term of office shall be three (3) years, one (1) member being appointed annually by the President. The President shall also appoint the chairman. At least one (1) member of the Committee shall be from Richmond; the President-Elect shall be an ex-officio member.

(b)—The Committee shall have charge of the finances of the Society and shall prepare and present a budget for the ensuing year to the Council at the annual meeting.

Health Insurance Committee

Section 10—The Health Insurance Committee shall consist of six (6) members, whose terms shall be staggered, and who shall serve as liaison to all third party carriers including the Blue Shield Plans, commercial insurance carriers and the State Department of Health (as Medicaid Intermediary).

Pharmacy

Section 11—The Committee on Pharmacy will have supervision over all matters pertaining to drugs and their relationship to the practice of medicine, pharmaceutic affairs and the drug industry.

B. Other Committees

(1) Appointments of committees other than standing committees shall lie within the discretion of the President. When he appoints such committees, he shall also name their chairmen.

(2) The President shall be the coordinator of all committees and as such may require reports from committee chairmen.

(3) Component societies may suggest the names of members for appointment to committees, but no such suggestions shall be binding upon the President.

(4) The President shall describe in writing the duties and responsibilities of each special committee appointed by him and this description shall be filed for record with the Executive Vice-President. For this purpose, the President may adopt any committee description already on file.

ARTICLE XII—Official Publication

The official publication of the Society shall be known as the VIRGINIA MEDICAL MONTHLY. Publication of the journal shall be under the control of the Editorial Board which shall cooperate in every way with the various committees of the Society for the good of the organization.

ARTICLE XIII—Ethics

The ethical principles governing the members of the American Medical Association shall govern the Society.

ARTICLE XIV—Rules of Order

The deliberations of the Society shall be conducted in accordance with parliamentary usage as defined in *Sturgis' Code of Procedure* (current Edition).

ARTICLE XV—Seal

The Society shall have a seal bearing date of organization of the Society. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE XVI—Amendments

These By-Laws may be amended at an annual session by a two-thirds vote of the House of Delegates, and ratified by a general meeting of the Society. All previous Constitutions and By-Laws of the Society are repealed when these By-Laws are adopted and put into effect.

ARTICLE XVII—When in Force

These By-Laws shall be in force upon adoption by the House of Delegates and ratification by a general meeting of the Society, all in accordance with the provisions of the Constitution and By-Laws heretofore in effect.

K. K. Wallace, Jr., M.D., *Chairman*
Kinloch Nelson, M.D.
Carrington Williams, Jr., M.D.

LEGISLATIVE

These are, indeed, busy days for your Committee—particularly since the General Assembly is meeting annually. Matters pertaining to health are quite popular on Capitol Hill these days—as evidenced by the large number of health related bills introduced each year.

There were 180 such bills and resolutions introduced during the 1974 session of the General Assembly and your Committee followed each one through to its final disposition. This involved numerous appearances before committees of both Houses. It is interesting to note that 34 health related bills were carried over to the 1975 session.

Your Committee believes that a bill by bill report is in order and has attempted to list them by category. Those bills which have been underlined should be of particular interest and importance to the profession.

1. ABORTION—BIRTH CONTROL—STERILIZATION

Bill No.	*Sponsor—Description—Status*
SB-56	*Gray—Abortion (Death Penalty)*—Changes in Code of Virginia to comply with Supreme Court decisions. (Carried over)
HB-365	*Michie—Sterilization*—Persons 18 years of age or older. (Killed in Committee)
HJR-43	*Michie—Public Birth Control Program*—Joint Boards of Medicine and Nursing to permit State Health Department to utilize family planning Nurse Practitioners in Commonwealth's—(Carried over)
HB-648*	*Vickery—Sexual Sterilization*—To repeal sections relating to patients in State hospitals. (Enacted)
HB-972	*Durette—Abortion*—Relating to—to comply with Supreme Court decisions. (Carried over)
HB-1040	*Durette—Abortion*—New conscience clause added to present statute. (Enacted)
HJR-92	*McMurtrie—Abortion* — Memorializing Congress to propose Constitutional Amendment against—(Killed in Committee)
HJR-110	*Dillard—Family Planning*—To establish a Council on—and Family Health. (Killed in Committee)
HJR-144	*Durette — Abortion* — Memorializing Congress to propose constitutional amendment against—(Carried over)
SJR-44	*Goode—Quality of Life*—To develop policies which will "guard against overpopulation of the Commonwealth". (Died in Committee)

2. BOARD OF MEDICINE

*HB-677**	*Giesen—Treatment for Practitioners of Healing Arts*—Mandatory reporting of voluntary treatment for alcoholism, drug addiction or mental, emotional or personality disorders. (Enacted)
HB-726	*Pendleton—Continuing Medical Education*—Mandatory for renewal of license. (Carried over)
HB-732	*Pendleton—Continuing Medical Education*—"Permissive" legislation based on New Mexico Statute concurrently with the Commission on Medical Education established by the Society. (Carried over)

* Denotes an amended bill.

SB-324 *Buchanan—Board of Medicine*—Changes in Medical Practice Act. (Carried over)

3. CHILDREN

HB-180 *Thomas—Handicapped Children*—Full State support for education of—(Killed in Committee)

HB-229 *Michie—Child Abuse*—Reporting of suspected cases; duty of persons under receipt of report; immunity from liability for reporting; central registry; on physician-patient and husband-wife privilege. (Carried over)

HB-318 *McClanan—Child Abuse*—Physician-patient and husband-wife privilege shall not apply to exclude the admission of such report into evidence. (Killed in Committee)

HB-416 *Gwathmey—Child Abuse*—To provide for a State Office of Child Abuse Information and Education, its powers and duties; central registry; district investigative teams; mandatory reporting; immunity from civil liability, etc. (Carried over)

HB-453 *Lechner—Child Abuse*—Physical and mental exams, treatment, nursing and medical care, and protective custody of child suspected of being abused. (Killed in Committee)

HJR-38 *McDiarmid—Child Labor Laws*—To continue study of certain aspects of. (House and Senate agreed to)

SB-164 *Gartlan—Handicapped Children*—State to bear handicapped education costs. (Enacted)

SJR-17* *Wilder—Youthful Offenders*—Continue study on planning and delivery of services to—and on probation and parole matters. (House and Senate agreed to)

HB-464 *Axselle—Maternal and Child Health*—Liens and claims for personal injuries paid by Medicaid, Maternal and Child Health or Crippled Children Program. (Enacted)

HB-529 *Lechner—Child Abuse Commission*—Creating child injury review commissions in localities; child injury form; immunity and penalty provision. (Killed in Committee)

HB-536 *Pickett—Dangerous Food for Children*—Prohibit giving child any food or beverage containing certain dangerous substances. (Killed in Committee)

HB-669 *O'Brien—Handicapped Children*—Reimbursement of parents for education. (Carried over)

HB-814 *Diamonstein—Handicapped*—To provide private education for—in State institutions. (Killed in Committee)

HB-815 *Diamonstein—Handicapped*—Payments to parents by local school boards for education of—(Carried over)

HB-939 *Diamonstein—Handicapped Children*—Payments to parents and special schools for education of—(Killed in Committee)

HB-1008 *Durette—Child Abuse*—Appointment of a ad litem guardian. (Died in Committee)

SB-327 *Holland—Infant Formulas*—Expiration date on—(Carried over)

SB-328 *Holland—Infant Formulas*—Expiration date shown on container. (Killed in Committee)

4. DEPARTMENT OF CORRECTIONS

HB-128 *Barry*—Eligibility of inmates of *penal institutions* for *furlough*. (Carried over)

HB-222 *McMurtrie—Department of Corrections*—Transferral of certain divisions from Department of Welfare and Institutions Director; qualifications, functions, duties, etc. (Killed in Committee)

HB-293 *Rothrock—Temporary Confinement of Mentally Ill Escapees*—Sickness, death or discharge while in custody; warrants; arrests and confinement after escape. (Killed in Committee)

HB-633 *Diamonstein—Criminally insane*—Release of—subject to advice of Commonwealth's Attorney. (Enacted)

HB-871* *Gray—New Department of Corrections*—Transfer from State Board of Welfare. (Enacted)

*HB-907** *O'Brien—Jail Physicians*—Employment or regular—and other personnel. (Enacted)

HB-954 *Morrison—Criminally Insane*—Notice to Commonwealth Attorney when person released. (Killed in Committee)

SB-363* *Walker—Prisoners*—Medical services to—through local hospitals or private clinics. (Enacted)

SB-497* *F. T. Gray—Board of Corrections*—Transfer of powers and duties from

State Board of Welfare and Institutions. (Enacted)

SJR-31 *Walker—Defective Delinquents*—Crime Commission to study the handling of —and sex crime offenders. (House and Senate agreed to)

SJR-45* *Aldhizer—Virginia State Crime Commission*—To consider financial assistance to mandatorily released convicts. (House and Senate agreed to)

SJR-48 *Wilder—Youthful Offenders*—To be returned from out of State where receiving treatment elsewhere. (Carried over)

SJR-49 *Aldhizer—Crime Commission*—Appropriating funds for this year's operating expenses. (House and Senate agreed to)

5. EMERGENCY MEDICAL SERVICES

*SB-467** *Buchanan—Emergency Medical Services*—Authority and responsibility for State Board of Health for planning and development of a comprehensive emergency medical care system. (Enacted)

SJR-43* *Warren—Volunteer Rescue Squads*—To study establishment of State sponsored and supported central headquarters. (House and Senate agreed to)

6. HOSPITALS AND MEDICAL FACILITIES

HB-132* *Coleman—Nursing Home Administrators*—Continuing education for temporary nursing home administrators. (Passed House and Senate)

SB-70 *Hirst—Medical Enterprises*—Inducing Virginia location for—(Killed in Committee)

*HB-188** *Allen—Charitable Immunity*—To abolish. (Enacted)

HJR-41 *Harris—Nursing Home Needs*—To study—of the Virginia Medical Assistance Program. (Carried over)

SJR-22* *Truban—State, Local Hospitalization Program*—Study merger of—in the Virginia Medical Assistance Program. (House and Senate agreed to)

HB-489 *Marshall—Local Health Centers*—Including nursing homes, contract for services; bonds. (Killed in Committee)

HB-739 *Marshall—Geriatric Patients*—Separate facilities in State hospitals. (Enacted)

HB-931 *McDiarmid—State Hospitals*—None shall employ unlicensed physician unless in an approved internship or residency program. (Enacted)

HB-981* *Gunn—State Hospitals*—Who shall be liable for expenses of person. (Enacted)

HJR-107 *Washington—Domiciliary Care Facilities*—To study licensing of—(Killed in Committee)

7. INSURANCE

SB-67 *Townsend—Motor Vehicle Insurance*—Insurer required to inform insured of coverage available and premium to be charged prior to issuing or renewing a policy. (Killed in Committee)

SB-72 *Wilder—Chiropractice Services*—Providing health insurance which shall include chiropractic treatment to sheriffs and sergeants. (Killed in Committee)

HB-173* *Enroch—Auto Insurance Notice of Health Coverage*—Notice of optional coverages as to injuries to insured, his family and persons occupying insured vehicle. (Enacted)

SB-238 *Goode—Statute of Limitations*—Extending liability from 2 to 10 years. (Killed in Committee)

HB-796 *Morrison—Statute of Limitations*—Increasing time from 2 to 10 years. (Carried over)

HB-843 *Grayson—Health and Hospital Insurance*—For active duty National Guardsmen on official duty. (Carried over)

HB-849 *Grayson—State Health Insurance Program*—To include teachers under chiropractic treatment. (Died in Committee)

HB-964 *Morris—State Health Insurance Program*—To include Sheriffs and Sergeants under—chiropractic treatment included. (Died in Committee)

HB-359 *Slayton—No Fault*—Direct Payment Plan. (Carried over)

HB-447 *Williams—No Fault*—(Carried over)

HJR-78 *Melnick—Life, Accident and Health Insurance*—VALC to continue its study. (House and Senate agreed to)

SB-300 *Holland—No Fault*—Direct Payment Plan. (Carried over)

SB-349 *Moody—No Fault*—Optional insurance for vehicle occupants. (Died in Committee)

SB-381* *Brault—Policemen's Retirement*—Retirement system, disability benefits; death benefits and medical insurance costs. (Enacted)

8. LABORATORIES

HB-208 *Thomson—Serological Test*—For marriage—submitting report in writing in lay language to both persons and copy to State Department of Health. (Carried over)

HB-631* *Quinn—Blood Donors*—16 year old may donate blood with parents consent if eligible as donor. (Enacted)

9. MENTAL HEALTH

HB-152* *Giesen—Mental Health and Mental Retardation*—Increased allocation of State funds to community program. (Enacted)

HB-237* *Marshall—Convenience for Commitment Hearing*—Involuntary admission to State Hospital of a mentally ill person. (Enacted)

HJR-17 *Giesen—Mentally Retarded Citizens*—To develop an inter-agency plan for services to—(Killed in Committee)

HJR-18 *Giesen—Prevention of Medical Causes of Mental Retardation*—Study of programs for—(House and Senate agreed to)

SB-197 *Yeatts—Mental Health and Mental Retardation*—Community Service Boards can request list of discharged persons and their home addresses. (Enacted)

HB-784 *Coleman—Areas of Incompetency*—When such persons may be adjudicated partially incompetent. (Carried over)

HB-788 *McDiarmid—Community Mental Health and Mental Retardation Services*—Purpose and services provided—including drugs and medicines, pre and post admission. (Enacted)

*HB-794** *McDiarmid—Rights of Patients*—In Department of Mental Health and Mental Retardation. (Enacted)

HB-834* *McMurtrie—Mental Hospitals*—Emergency admission procedures. (Killed in Committee)

HB-878 *Slayton—Mentally Ill*—Admissions to institutions for—(Carried over)

HJR-130 *McDiarmid—Mentally Ill*—To study—and mentally retarded. (House and Senate agreed to)

SB-308* *Hirst—State Hospital Confinements*—Must be reviewed periodically to determine whether person should be retained at such hospital. (Enacted)

SB-337 *Bendheim—Commission on Alcohol Problems*—Creating same—treatment, prevention and rehabilitation, etc. (Carried over)

SJR-58 *Willey—Drug and Alcohol Abuse Control Programs*—To combine all in one State agency. (House and Senate agreed to)

10. OPTOMETRY AND PSYCHOLOGY

*SJR-1** *Manns—Optometry School Study*—To consider and report on the need for establishment of a school of optometry. (House and Senate agreed to)

HB-663 *Garland—Opticians*—Changes in optometry law. (Carried over)

HB-703 *Garland—Practice of Psychology*—Changes in psychology law. (Carried over)

11. PHARMACY (DRUGS)

HB-29 *Marshall—Drug Advertising*—Permitting newspaper advertising for prescription drug discount plans for senior citizens. (Killed in Committee)

SB-101 *Smith—Controlled Paraphernalia*—Search warrants and destruction of—(Enacted)

HB-205 *Stambaugh—Pharmacy Advertising*—To permit prescription drug newspaper advertising. (Killed in Committee)

HB-367* *Michie—Venereal Disease*—Sale of devices to prevent—by use of vending machines. (Enacted)

HB-717 *Wilson—Labeling of Prescriptions*—Showing brand name or proprietary name of manufacturer. (Killed in Committee)

HB-762 *Allen—Marijuana*—$100.00 fine on conviction. (Killed in Committee)

HB-930 *Guest—Board of Pharmacy*—Nominations to—By Virginia Pharmaceutical Association. (Died in Committee)

HB-979 *Allen—Marijuana*—$5,000.00 maximum fine. (Killed in Committee)

SB-325 *Goode—Controlled substances*—No one to use Schedule I, II, or III substances other than those licensed to prescribe or administer. (Died in Committee)

SB-396* *Willey—Drug Abuse Appropriations Review*—Powers and duties of Drug Abuse Advisory Council. (Enacted)

SB-430 *Warren—Distributing Controlled Drugs*—Presumption as to intent of—(Carried over)

SB-468* *Fears—Marijuana*—Moderation of penalties; commitment, and treatment of convicted persons. (Enacted)

12. PHYSICIANS' ASSISTANTS

SB-251 *Babalas—Acupuncture*—To include the practice of—"Doctors of Acupuncture" —21 years of age or more; high school graduate; approved three year course in the U.S. or Republic of China, Korea, Japan, etc., or has practiced acupuncture for at least five years. (Carried over—will possibly be amended to allow such persons to function as physicians' assistants)

13. PROFESSIONS AND OCCUPATIONS

SB-95 *Fears—Admission to Graduate and Professional Schools*—50% of entering class must be composed of qualified "students of an average collegiate record". (Killed in Committee)

SB-121 *Willey—State Council of Higher Education*—Creation of duties, responsibilities and authority. (Enacted)

SB-126* *Rawlings—Commission for Professional and Occupational Regulation*—Creation of—Duties of existing and future regulatory boards, provisions for penalties for violations. (Enacted)

HB-183 *Diamonstein—Commission for Professional and Occupational Regulation*—Creation of—duties of existing and future regulatory boards; penalties for violation. (Killed in Committee)

HB-396 *Stambaugh—Consumer Boards*—Provide for ⅓ consumer representation on all agencies conducting examinations or issuing certificates or licenses to practice a profession or occupation. (Killed in Committee)

14. SAFETY

HB-9* *Cantrell—Studded Tires*—Use of such permissible annually. (Died in House Committee)

SB-65* *Brault—Studded Tires*—One year breather for—(Enacted)

SB-98* *Campbell—Virginia Driver Improvement Act*—Amendments to offenses, habitual offender sections, demerit point system, etc. (Enacted)

HB-161 *Diamonstein—First Offender Driving License*—Limited privileges in certain cases; penalties for violations. (Killed in Committee)

HB-245 *Parker—Temporary Drivers' Permits*—Issuance under certain conditions, occupation, business or profession. (Killed in Committee)

HJR-16 *Pendleton—Drunken Drivers*—House Committee on Health, Welfare and Institutions to study laws relating to—(House and Senate agreed to)

HB-630 *Diamonstein—Safety Glazing*—To repeal sections enacted in 1973. (Enacted)

HB-654 *Giesen—Car Safety Belts*—Require use of lap belts or combination with shoulder straps. (Died in Committee—no action taken)

HB-699 *Campbell—Noise Limits*—For certain motor vehicles. (Carried over)

HB-984* *Diamonstein—Uniform Statewide Building Code*—Safety glazing requirements set forth. (Enacted)

SB-371 *Brault—Safety Belts*—Mandatory lap and shoulder strap requirement; penalties for violations. (Killed in Committee)

SB-508 *Parkerson—Noise Levels*—Relating to unacceptable for motor vehicles. (Carried over)

SJR-70* *Waddell—Uniform Statewide Building Code*—Requiring sprinkler systems in buildings of six stories or more. (House and Senate agreed to)

15. WORKMAN'S COMPENSATION—HANDICAPPED—AGING

SB-20* *Brault—Handicapped Persons*—Special parking privileges. (Enacted)

SJR-9* *Aldhizer*—Creating the *Workmen's Compensation Commission.* (House and Senate agreed to)

SB-93* *Aldhizer—Pneumoconiosis*—Increased compensation for incapacity and disability compensation. (Enacted)

SB-94 *Aldhizer—Workmen's Compensation*—Periods of incapacity shall be deemed to continue for periods specified and compensation therefor. (Died in Committee)

HB-403* *Marshall—Office on Aging*—Creation of —powers and duties.

HB-781* *Coleman—Public Homes*—Local boards of welfare to establish and operate—for indigent, aged, infirm or incapacitated. (Enacted)

HB-823 *Giesen—Handicapped Person*—Wrongful employment discrimination. (Carried over)

HB-854 *Slayton—Aged*—Providing protective services for aged and infirm. (Enacted)

HB-867 *Slayton—Incompetent*—Aged or impaired—guardian or committee to take care of person or property. (Died in Committee)

HB-868 *Slayton—Aged or Infirm*—Protective services for. (Died in Committee)

HB-957* *Murphy—Handicapped Persons*—Providing for ramps from sidewalks for—(Enacted)

HB-966 *Moss—Pneumoconiosis* — Compensation for—(Killed in Committee)

HJR-96 *Garland—Deaf and Blind*—Joint subcommittee to study education of—(House and Senate agreed to)

SB-310 *Brault—Deaf and Blind*—As handicapped—Special education, transportation, etc. (Killed in Committee)

SB-517* *Gartlan—Human Services*—To provide pilot projects for delivery of—(Enacted)

16. MISCELLANEOUS

HB-110 *Callahan—Political Contributions*—Prohibition of—by certain parties—penalties for violations. (Carried over to 1975)

SJR-7* *Willey—Commission to Study Costs and Administration of Health Care Service*—To Continue (House and Senate agreed to)

SB-107* *Edmunds—Cystic Fibrosis*—Health services for patients. (Enacted)

HB-166* *Marshall—Minimum Wage*—Those excluded, penalties and violations. (Vetoed by Governor)

HB-167* *Gwathmey—Pleading Guilty*—Failure of person to submit to taking blood or breath to determine alcoholic content; penalties. (Vetoed by Governor)

HB-177 *Pendleton—Health Affairs Commission*—Creation of—data center; Director; powers and duties; cooperation of other State agencies; appropriations. (Died in Committee)

HB-234 *Pendleton—Health Manpower*—Appropriations to continue study. (Killed in Committee)

HB-366* *Michie—Artificial Insemination*—Legitimacy of children conceived by— (Enacted)

HB-368 *Diamonstein—Hemophilia*—Health services for persons suffering from—(Enacted)

HB-391* *Marshall—Smallpox*—Transfer of language from one section to another. (Enacted)

HJR-19 *Allen—Disclosure of Information*—Calculated to influence the public with respect to legislation. (Killed in Committee)

HJR-20 *Allen—Sovereign Immunity*—To study the doctrine of—with a view to adoption of a State tort claims act. (House and Senate agreed to)

HB-520 *Carwile—Food Handlers*—Provide for health standards and annual physical exam. (Carried over)

HB-787 *Diamonstein—Professional Counselors*—Provide for "trained personnel and guidance services with emphasis on individual and group guidance and counseling designed to assist individuals in achieving more effective personal, social, and educational and vocational development and adjustment". (Killed in Committee)

HB-822* *Giesen—Nursing Scholarships*—Increasing amount. (Enacted)

HJR-46 *Callahan—School Health Nursing Services*—State Board of Education and Board of Health to determine appropriate level of services needed. (House and Senate agreed to)

HJR-132 *Morrison—Forensic Science Academy*—To study the establishment of a—(House and Senate agreed to)

HJR-141 *Grayson—HMO*—To study progressive health legislation that would encourage the establishment of—in the Commonwealth. (Killed in Senate Committee)

HJR-145 *Michie—Health Laws*—To study recodification of—(Title 32) (House and Senate agreed to)

SB-215 *Michael—Time of Death*—Amendments to when a person is deemed legally dead. (Killed in Committee)

SB-278 *Waddell—Food Handlers Physical*—Provide health standards and annual physical. (Killed in Committee)

SB-299* *Warren—Rabies Control*—Under State Board of Health—Certified animal technician to give rabies inoculations under supervision of veterinarian. (Killed in House Committee)

SB-354 *Willey—State Board of Health*—Changing quorum for meetings from 3 to 4 members. (Enacted)

SB-355 *Willey—State Board of Health*—Appointment of members; their terms and vacancies. (Enacted)

SB-366* *Michie—Artificial Insemination*—To provide for the legitimacy of children conceived by—(Enacted)

SB-428* *McNamara—Medical Examiners*—Duties of medical examiner upon receipt of notice of death; report; fees. (Enacted)

SB-464 *Brault—Blue Cross—Blue Shield*—Enlargement of Board of Directors. (Enacted)

SB-504 *Canada—Uniform Anatomical Gift Act*—Division of Motor Vehicles may receive properly executed wills, cards or documents for safekeeping. (Carried over)

SJR-54* *Dawbarn—Organ Donor Program*—To have division of Motor Vehicles to encourage use of organ donor cards. (House and Senate agreed to)

SJR-71* *Waddell—Health of Restaurant Employees*—To study inspection of restaurants and others and the health of employees. (House and Senate agreed to)

PUBLICATION

The Virginia Medical Monthly has included a new feature by publishing Medical and Surgical Grand Rounds prepared by the medical and surgical departments of the Medical College of Virginia and the University of Virginia. These articles have been well prepared and equally well received.

The journal has received many excellent scientific papers for publication during the past year but more are desired and there has been a dearth of articles dealing with obstetrical matters. The Virginia Medical Monthly would welcome more papers on this specialty.

One special issue appeared during 1974. This number was prepared by Dr. C. Barrie Cook and contained excellent articles by members of the staff of the Fairfax Hospital. It has been the experience of the journal that one special issue each year fits very well in the publication schedule of the Virginia Medical Monthly but if additional issues are added there has been delay in the appearance of individual articles with hardship on the part of some contributors.

The early preparation of this report prevents inclusion of the financial status of the journal (1973-74) but this information will be available at the November meeting in Williamsburg.

Harry J. Warthen, M.D., *Chairman*

PHARMACY

A meeting of the Pharmacy Committee of The Medical Society of Virginia was held at Society Headquarters on December 6, 1973. Senator Cline DuVal, II requested discussion and consideration of Society support for a bill he proposed to introduce in the 1974 legislature which would in effect have provided for drug substitution by pharmacists from a state drug formulary list to have been prepared on a generic basis by an appointed Virginia Formulary Council. No consideration was provided for therapeutic equivalence and based on this major deficiency, along with a number of other objectionable features, the committee recommended that council disapprove the proposed voluntary formulary legislation. Council concurred with this recommendation at its January 9, 1974, meeting.

Dr. Mickael M. Kannan requested Society evaluation of the marketing practices of the ethical drug industry with special emphasis on detail men, advertising methods and subsidization of unsolicited printed material as journals, newspapers and magazines. He felt that physician-industry communication should be established to develop optimal standards of advertising cost utilization, educational value and patient benefit for drug product promotion. This proposal, referred to the committee from council, was beyond the realistic capabilities of the Pharmacy Committee to consider; and the suggestion was made that this be pursued through the offices of a more appropriate organization such as the AMA.

The committee's attention was directed to The Virginia Pharmacists' High Blood Pressure Program on May 15, 1974, along with voting members of Council. This proposal was initially presented to the Lynchburg Academy of Medicine Board on April 22, 1974, by Dr. James McKinney of the Department of Pharmacy of the Medical College of Virginia and Mr. Art Robertson, a Lynchburg pharmacist. The proposal has strong ramifications of the practice of medicine and was referred to the State Board of Medicine, The Medical Society of Virginia and the Pharmacy Committee of The Medical Society of Virginia by Dr. Robert L. Glenn, President of the Lynchburg Academy of Medicine by instruction of his membership. The Pharmacy Committee will await the recommendations of Council before considering this proposal as a body.

The committee expressed its appreciation to Dr. Jean K. Weston by letter from the Chairman for his invaluable assistance to the committee and The Medical Society of Virginia in resolving our pharmacy problems over the past three years. Dr. Weston has retired from the National Pharmaceutical Council but will remain a very active and interested member of The Medical Society of Virginia.

The Pharmacy Committee is uniformly opposed to the H.E.W.-Weinburger proposal of restricting reimbursement for prescription drugs through federally funded programs to "the lowest cost at which the drug is generally available" for the reasons of detriment to patient care expressed by The Medical Society of Virginia

to Senator Russell B. Long, Chairman of the Senate Finance Committee.

Lloyd T. Griffith, M.D., *Chairman*

MENTAL HEALTH

The Mental Health Committee of The Medical Society of Virginia held two meetings—May 21, 1974, and June 26, 1974. Mr. Willard C. Osburn, Administrative Assistant of The Medical Society of Virginia, acted as secretary of the Committee.

During the first meeting Mr. Robert I. Howard, Executive Vice-President of The Medical Society of Virginia, informed the Committee of the latest developments of PSRO within the Society. The Committee manifested considerable interest in the latest developments and all expressed the desire for psychiatry to be represented within the framework of the PSRO as it is now being organized by The Medical Society of Virginia.

Mrs. Dorothy K. Thompson was a guest of the Committee at its first meeting. She expressed the feeling that The Medical Society should become more involved in mental health education and should be instrumental in initiating a preventive program. She discussed resource materials that are available and expressed the feeling that these materials should be made available for educational purposes. The Committee was unanimous in its opinion that The Medical Society of Virginia should support, in principle, all facets of mental health education and prevention and that this position, which was endorsed by The Mental Health Committee, be made known to the council of The Medical Society of Virginia.

Mr. William R. Miller, Attorney for The Medical Society of Virginia, was a guest of the Committee at its first meeting. He conducted a very interesting discussion of several laws that were introduced during the most recent meeting of the General Assembly of Virginia. The first bill reviewed was House Bill 703 dealing with changes in the psychology practice law. It was agreed that this bill would lower standards in the practice of psychology and it was, also, agreed that the Committee should continue to oppose the passage of this bill and so inform the proper committee of The Medical Society.

It was agreed that Senate Bill 126 establishing a Commission for Professional and Occupational Regulation should be watched carefully for further developments to see just what its ramifications would be.

Much discussion centered around House Bill 677 relating to the Reporting of Practitioners of the Healing Arts undergoing treatment for mental illness. It was the consensus that the Committee does not object to mandatory reporting of those who are committed on an involuntary basis, but definitely oppose mandatory reporting of those who are admitted to hospitals on a voluntary basis. It was also suggested that the reporting of such admissions to the Board of Medicine be done by the committing judge of the court from which the commitment papers are issued.

There was considerable discussion by the Committee relative to questions asked on applications of physicians for licensure by the Board of Medicine in Virginia. It was agreed by a majority of the members present that the following question should be retained: "Have you ever been treated, but not hospitalized, for a mental or emotional illness, drug addiction or inebriety?". It was recommended by unanimous vote of the Committee that the question, "Have you ever received psychotherapy?" be deleted.

Senate Bill 337 creating a Commission on Alcohol Problems was discussed at the first meeting of the Committee. It was decided to send a copy of the bill to all members of the Sub-Committee on Alcohol and invite that Committee to meet with The Mental Health Committee at its second meeting for a discussion of this bill.

Dr. Edward C. Wilson, representing the Sub-Committee on Alcoholism, met with the Committee during its second meeting. Dr. Wilson discussed in detail Senate Bill 337 which among other things creates a commission on alcohol problems, to direct the Commonwealth's program of alcoholism treatment, prevention and rehabilitation, admission for treatment of alcoholism, etc.

1. It provides for a completely new commission and eliminates the Advisory Committee to the Commissioner of Health as it now exists.
2. It speaks only to the jailed alcoholic, which represents only about 5% of the population, and therefore, ignores the working man, which represents the other 95% of the population.
3. The thrust of the bill is, indeed, laudible, but this type of jailed alcoholic is the type you can do very little with, as has been shown by past experience.

The Committee considered that, politically speaking, this bill would be hard to oppose. The consensus was that $6,000,000.00 which would be appropriated to carry out this program is a great deal of money to care for 5% of the population, to translocate them from jails to a community care system.

Dr. Merritt Foster, Chairman of the Sub-Committee on Drug Abuse met with the Committee during its second meeting. There was discussion as to the advisability of recommending a state level liaison committee between medicine and law enforcement in drug control. It was the feeling of the Committee that the Board of Medicine now handles matters of this kind and no action was taken by the Committee.

The Committee discussed the use of nurse therapists for group therapy under the direct supervision of a psychiatrist. There was considerable discussion of this matter and it was finally agreed by the Committee to defer action at this time with the idea that investigation should be made into several facets of this proposal, especially certain rules and regulations governing the nursing profession.

The Committee learned that a special study commission of the legislature is investigating various problems associated with insurance companies advertising and practice. It was brought out that The Medical Society of Virginia is composing a letter to this Committee

recommending that *all exceptions of coverage be listed in bold type on the face of every policy to be sure the insured realizes what coverage is not available in said policy*. The Committee voiced its endorsement of this letter since action of this type had been recommended by The Mental Health Committee many times previously.

The Chairman wishes to express to the remainder of the Committee and to Mr. Robert I. Howard, Executive Vice-President of The Medical Society of Virginia, and Mr. Willard C. Osburn, Administrative Assistant, The Medical Society of Virginia, his appreciation for their cooperation in the formulation of this report.

John R. Saunders, M.D., *Chairman*
W. D. Buxton, M.D.
Emory F. Hodges, Jr., M.D.
John O. Hurt, Jr., M.D.
Asad Masri, M.D.
Morgan Scott, M.D.
Robert H. Thrasher, M.D.
R. Terrell Wingfield, M.D.

JOINT PRACTICE

The Virginia Joint Practice Committee, composed of members from The Medical Society of Virginia and the Virginia Nurses' Association, was organized on February 4, 1974. This committee consists of eight physicians appointed from The Medical Society of Virginia and eight nurses appointed from the Virginia Nurses' Association. Members are:

Physicians:

C. Barrie Cook, M.D.
John L. Guerrant, M.D.
Robert F. Mann, M.D.
Richard A. Michaux, M.D.
Joseph W. Milam, M.D.
William E. Painter, M.D.
W. N. Thompson, M.D.
Charles H. Townes, M.D.

Nurses:

Carol Blakey, R.N.
Barbara Brodie, R.N.
Linda Morrison, R.N.
Hettie Nagel, R.N.
Anna Belle Kinney, R.N.
Sister Margaret McCabe, R.N.
Diana Polk, R.N.
Doris Webster, R.N.

All of the members were present at the organizational meeting with the exception of Barbara Brodie, R.N. and Richard A. Michaux, M.D. At that time Dr. W. N. Thompson and Ms. Carol Blakey, R.N., were elected as Co-Chairmen for the year. Diana Polk, R.N., was elected as Secretary-Treasurer.

It was moved by Dr. Cook and seconded by Dr. Milam that the Virginia Joint Practice Committee, formed by The Medical Society of Virginia and the Virginia Nurses' Association, is autonomous and can take actions and make recommendations in whatever manner necessary to carry out its objectives. This motion was adopted.

The committee reviewed the Proposed Rules and Regulations for Certification of Nurse Practitioners and recommended its endorsement with very few changes. Hettie Nagel, R.N., and Richard A. Michaux, M.D., were appointed to appear before the public hearing and present the Committee's endorsement.

The Committee agreed to meet twice a year and at call meetings when deemed necessary by the Co-Chairmen.

It was also agreed that minutes of each meeting be sent to the respective boards of the parent organizations that close communications may be maintained with each parent organization with the hope that this action would encourage constructive suggestions.

GUIDELINES: The Committee went on record as adopting the 7 North Carolina guidelines for the objectives of the Virginia Joint Practice Committee. The motion was made by Dr. Mann, was seconded and adopted.

The Objectives are:

1. To advance joint planning and action by improving communications and serve as a liaison between medicine and nursing of the State and between the Committee's two parent organizations.
2. To examine the roles and functions in medical and nursing practice in order to define and evaluate new and altered patterns and to promote efficient and effective use of health manpower.
3. To serve as a liaison between and a resource group for the Virginia Boards of Medicine and Nursing.
4. To promote the establishment of Joint Practice Committees at the grassroots level.
5. To appoint task forces to study and recommend appropriate changes in roles and functions of nurses and physicians in specific practice settings to increase the delivery of quality health care.
6. To study and react jointly to matters of mutual concern, including: health legislation, manpower distribution, preparation for practice, etc.
7. To develop joint statements of changing roles and related matters and to submit these to the parent bodies for approval and implementation.
8. (taken from the National Joint Practice Commission guidelines) To propose changes in educational patterns and relationships that would enhance the new role functioning of nurses and physicians.

Additional objectives by the National Joint Practice Commission were also adopted. They are:

1. Recommend (advocate) a constant modification in the training and practice of medicine and nursing to meet present and future health needs.
2. Examine interdisciplinary teaching programs.
3. Study present motivation modalities that affect medical and nursing student selection of specialty.

A second meeting was held on April 29, 1974, at which time it was reported that Dr. Michaux and Ms. Nagel had attended the public hearing on the proposed

Rules and Regulations for the Certification of Nurse Practitioners as well as Rules regulating licensing of Physician Assistants which was held on April 24. The results of the hearing had not been reported.

The committee discussed the length of appointment of members. It was felt that continuity of members was very important in implementing work of the Committee.

Priorities of the MSV-VNA Joint Practice Committee objectives were discussed. The Committee expressed interest in pursuing Objective No. 4 (to promote the establishment of Joint Practice Committees at the grass-roots level) at this time. They also decided to explore the possibility of sponsoring a state conference to explain the objectives of the Joint Practice Committee by writing the local nursing and medical associations to obtain interest in such a conference. Objectives of the conference if planned, are:

1. Discuss objectives of national and state joint practice committees.
2. Explain role of state committee as a resource to physician-nurse liaison (relationships on the local level).
3. Facilitate formation of local joint practice committees for identification and solution of problems in health care.

The next meeting of the committee is expected to be held in September to ascertain progress made thus far.

W. N. Thompson, M.D., *Co-Chairman*

REHABILITATION

It has been a busy year for your Rehabilitation Committee. Throughout the year members of the Committee have provided the Virginia Department of Vocational Rehabilitation with consultation and assistance regarding medically related matters.

The Committee met at the Woodrow Wilson Rehabilitation Center, Fishersville, on October 14, 1973, with ten of the eighteen members present. Also attending were representatives from the Department of Vocational Rehabilitation who presented for Committee reaction an overview of the Disability Determination Program and the Spinal Cord Injury Program. The Committee reviewed and approved a revision of the Department of Vocational Rehabilitation Medical Fee Schedule. Further refinement of this Fee Schedule will be presented at our next meeting. The Committee considered a wide range of other medically related problems and made a number of recommendations to the Department of Vocational Rehabilitation.

Your committee supports H.B. No. 832 and suggests an amendment by addition to include the mentally handicapped and the restoration of Vocational Rehabilitation benefits to the injured workers as a fiscal responsibility of Workmen's Compensation.

Members of the Committee were saddened by the death of Dr. Joseph E. Anderson, who had served on our committee for many years. A resolution of appreciation was sent to Mrs. Anderson for the service provided to the Committee by Dr. Anderson.

Alexander McCausland, M.D., *Chairman*
Robert J. Faulconer, M.D.
G. S. Fitz-Hugh, M.D.
Hunter S. Jackson, M.D.
Richard H. Lowe, M.D.
Frank C. McCue, III, M.D.
J. Treacy O'Hanlan, M.D.
William Orr, M.D.
Carney C. Pearce, Jr., M.D.
Reno R. Porter, M.D.
William D. Rusher, M.D.
Frank A. Strickler, M.D.
W. W. Walton, M.D.
David K. Webster, M.D.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH

The Committee on Environmental and Occupational Health held no meeting during the past year. However, the committee members were informed of activities of the State Air Pollution Control Board and of actions taken by this board as the result of the energy crisis.

The State Air Pollution Control Board recognizes the energy realities and believes that our industries should not be allowed to close because of lack of fuel. To accomplish this the Board has developed a program to approve *short-term* exceptions to state and federal emission standards to ensure an adequate fuel supply for industry. However, there will be no abandonment of air quality standards in Virginia and these will be maintained at safe levels as far as adverse health effects are concerned. The Board anticipates that safe air quality standards can be maintained despite short term fuel variances for some industries in our state. In February 1974, the Board adopted an emergency energy variance procedure that will allow a company 120 days of non-compliance with regulations during which time the company will obtain adequate information for the Board to make a decision about its future fuel use and air pollution abatement needs if high sulfur fuels will continue to be used. The Board plans to weigh the economic and social hardship that would result from a denial of a variance against the health impacts that would result from the added air pollution.

Our committee supported this position of the Board and its plan to hold the line on air quality as much as possible during this period of energy crisis, with only temporary fuel variance to be approved.

Edward S. Ray, M.D., *Chairman*
William S. Dingledine, M.D., *Vice Chairman*
James M. MacMillan
R. F. Sappington, Jr., M.D.
Charles S. Sale, M.D.
Maurice M. Miller, M.D.
William F. Schmidt, M.D.

MEDICAL ASPECTS OF SPORTS COMMITTEE

The Committee has coordinated efforts with the Virginia Orthopedic Society, and progress has been made in the following areas:

1. Re-established program with the Annual Meeting

of the Virginia High School League Annual Meeting. Medical Society Program on August 1 and 2. 1974.

2. Coordinated state wide sports program with University Center. First meeting held at University of Virginia June 17, 18, 19, 1974, under co-chairmanship of Dr. Frank McCue and Dr. Clifford E. Brubacker, Ph.D.
3. Sponsored resolution passed by 1973 Medical Society House of Delegates to recommend our State Legislature enact legislation to have Virginia high school athletic teams covered by certified athletic trainers.
4. Continued encouragement of all local component medical societies to establish sports committees and sponsor regional sports medicine programs.
5. Aided establishment of sports medicine programs to local level by technical support and supplying speakers when needed.

Robert P. Nirschl, M.D., *Chairman*
Gervas S. Taylor, Jr., M.D.
Richard H. Fisher, M.D.
Frank C. McCue, III, M.D.
Oscar W. Ward, Jr., M.D.
J. Thomas Hulvey, M.D.
Joel A. Mason, M.D.
James B. Jones, M.D.
Richard Bullock, M.D.
H. C. Alexander, III, M.D.
Louis P. Ripley, M.D.

ADVISORY TO WOMAN'S AUXILIARY

Your committee has been in contact with Mrs. Fletcher on many occasions during the past year. She is doing an outstanding job as President of the Woman's Auxiliary to The Medical Society of Virginia, and the committee is in complete agreement with her many programs.

The committee knows of no matters—and has no recommendations—requiring action by the House of Delegates this year.

William Reardon, M.D., *Chairman*

Woman's Auxiliary . . . .

52nd ANNUAL CONVENTION
WOMAN'S AUXILIARY TO
THE MEDICAL SOCIETY OF VIRGINIA
November 3, 4, 5 and 6, 1974
CONFERENCE CENTER
WILLIAMSBURG, VIRGINIA

A cordial invitation is extended to all members of the Auxiliary, their guests, and the wives of physicians attending the convention, to register, to attend the meetings and to participate in all social functions.

REGISTRATION—Conference Center (North Gallery)

Sunday—November 3—1:00 to 5:00 P.M.

Monday—November 4—8:00 A.M. to 12:00 Noon

SUNDAY, NOVEMBER 3

3:00 P.M.—Pre-Convention Board Meeting (Room A)

6:00 P.M.—VaMPAC Cocktail Hour (North Gallery)

7:00 P.M.—VaMPAC Banquet (Tidewater Room)

MONDAY, NOVEMBER 4

8:00-8:45 A.M.—Continental Breakfast (Rooms A-B)

9:00 A.M.—Formal Opening of the 52nd Annual Meeting (Rooms A-B)

Mrs. Donald F. Fletcher, Jr., President, presiding.

Invocation and Memorial Service—Mrs. Joseph Straughan, Chaplain

Pledge of Allegiance to the Flag

Pledge of Loyalty

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Address of Welcome—Mrs. H. A. Prillaman, Jr., President, Auxiliary to the Newport News Medical Society

Response—Mrs. William A. Cook, Jr.

Presentation of Honored Guests—Mrs. Donald F. Fletcher, Jr.

Recognition of State Officers and Committee Chairmen

Greetings—Dr. John A. Martin, President, and Dr. William R. Hill, President-Elect, The Medical Society of Virginia

Greetings—Mrs. W. Nash Thompson, President, Woman's Auxiliary to the Southern Medical Association

Convention Announcements—Mrs. Richard Robins, Co-Chairman

Roll Call—Mrs. Frank Buck, Jr., Recording Secretary

Report of Credentials Committee

Report of Reading Committee of 51st Annual Convention —Mrs. John Prominski, Chairman

Report of Auditing Committee of 51st Annual Convention—Mrs. Herbert Rogers, Chairman

Report of Treasurer—Mrs. Harold Williams

Report of Chairman of Delegates to 51st Annual Convention of the Woman's Auxiliary to the AMA—Mrs. Charles G. Smith

Report of Finance Committee—Mrs. George Kelly, Chairman

Recommendations from the Board—Mrs. Frank Buck, Jr.

Unfinished Business

New Business

Introduction of Keynote Speaker—Mrs. Richard F. Clark

Keynote Address—Mrs. Howard Liljestrand, President, Woman's Auxiliary to the AMA

Presentation of State Scrapbook

President of State President's Scrapbook—Mrs F. I. Carr, Jr.

Report of Nominating Committee—Mrs. William Reardon, Chairman

Election of Officers and Recognition

Courtesy Resolutions—Mrs. William S. Burton

Recess

ANNUAL LUNCHEON (Virginia Room)

12:00 P.M.—Hospitality Time

1:00 P.M.—Luncheon—Mrs. Donald F. Fletcher, Jr., President, presiding

Invocation—Mrs. Joseph Straughan, Chaplain

Recognition of Honored Guests, Past-Presidents and Members-at-Large

Presentation of Awards—Mrs. K. K. Wallace, Jr., Chairman

Presentation of State Member of the Year

Presentation of Honorary Membership

Installation of Officers—Mrs. Howard Liljestrand

Presentation of President's Pin—Mrs. Donald F. Fletcher, Jr.

Acceptance—Mrs. Randolph H. Hoge

Presentation of Past-President's Pin—Mrs. William Reardon

Musical Program—The Menchville High School Stage Band and Vocal Ensemble—Mr. David Solomon, Mrs. Hattie Webb, Directors

Convention Announcements—Mrs. William O. Harris, Co-Chairman

Adjournment

The Medical College of Virginia Alumni Association

6:00 P.M.—Reception (Virginia Room)

7:00 P.M.—Banquet (Virginia Room)

The University of Virginia Alumni Association

6:00 to 7:30 P.M.—Reception (Rooms A-B-C)

Duke University School of Medicine Alumni Association, Virginia Chapter

6:00 P.M.—Reception (Rooms E-F)

7:00 P.M.—Banquet (Rooms E-F)

TUESDAY, NOVEMBER 5

8:00 A.M.—Past State Presidents' Breakfast (Room E)

8:30 A.M.—Continental Breakfast for Board Members (Room A)

9:00 A.M.—Convention Board Meeting—Mrs. Randolph H. Hoge, President presiding (Room C)

All new State Officers, Directors, Committee Chairmen, County Presidents and Presidents-Elect are members of the 1974-75 Board and are expected to attend. Out-of-State Auxiliary members are invited

2:00 to 4:30 P.M.—Tour of Carter's Grove

The Medical Society of Virginia

6:30 P.M.—Reception (North Gallery)

7:30 P.M.—Banquet (Virginia Room)

MISCELLANEOUS INFORMATION

Scrapbooks will be on display in the Hospitality Room (Room 27, the Lodge)

Sunday—2:00-5:00 P.M.

Monday—9:00 A.M.-Noon; 3:00-5:00 P.M.

Tuesday—9:00 A.M.-Noon

AMA-ERF Tables—Auditorium Foyer

Information about Golf and Tennis and Tickets for the Luncheon and Tour will be available at the Registration Desk (North Gallery)

Medicare—Part B . . . .

CURTIS J. KELLY, JD

Disclosure of Information Relating to Unethical or Unprofessional Conduct by a Practitioner. (Ref. Sec. 6445, Part B Intermediary Manual)

An amendment to Regulation No. 1 of the Social Security Administration specifically authorized carriers and intermediaries to refer cases of apparent unethical practices to medical or other professional societies and State licensing boards.

Information obtained from a beneficiary is only to be disclosed to medical or other professional societies and State licensing boards if he (or his representative) has given his written authorization, unless it would necessitate the revealing of medical information that may be harmful to him or other considerations would make it inappropriate to do so.

Once a case has been brought to our attention, we are instructed to take the necessary steps to assure ourselves that what is actually involved is more than a mere suspicion of professionally deviate conduct or that merely a clerical error is involved. Also an isolated instance of questionable professional conduct would not ordinarily be referred.

On the other hand, the carrier need not compile sufficient weight of evidence so that a conclusive determination of misconduct is made prior to the referral; rather, the carrier is to ascertain the probability of misconduct, but will leave any further investigation, review and disciplinary action to the appropriate professional society or State board.

Types of Cases to be Referred:

1. *Over-utilization*—This usually refers to a pattern of medical care which consists of providing more services than are medically necessary or which is not in accordance with acceptable medical practice, e.g., an inordinate number of office visits over an extended period of time for a chronic type of illness, a conspicuously high number of injections, the ordering of excessive hospitalization, etc.

2. *Misutilization*—This involves the rendering of services that are not medically acceptable according to the standards of the community concerned.

3. *Overcharging*—This is to be interpreted as the charging of fees by a physician, or other practitioner, that are not commensurate with the services rendered. Also the billing for amounts in addition to the deductible and coinsurance after an assignment has been accepted falls into this category (violation of the assignment agreement).

4. *Violation of Ethics*—These violations involve conduct of a physician or other practitioner which is contrary to the principles of ethics of the professional society to which he may belong or in such a manner as to make his practice a danger to the health and welfare of his patients or to the public.

5. *Violation of the State's Professional Practice Statutes*—This involves the committing of acts which, under the applicable State law, would be grounds for suspension or revocation of his license to practice.

Those guidelines are not all inclusive so that any activities by a physician, or other practitioner, in his treatment of program beneficiaries which would warrant concern by professional societies should be delayed until such time as the Administration makes a decision regarding prosecution. If the Administration's decision is to move ahead with Federal prosecution, then referral to a professional society would be inappropriate. However, if it is decided that the case lacks the legal sufficiency to establish a prosecutable violation, referral of significant findings or irregularities to a professional society is proper.

Correspondence . . . .

The Internship Crisis in Virginia

To the Editor:

The Editorial by Dr. John A. Owen, Jr. in the May issue of the Virginia Medical Monthly entitled "The Internship Crisis in Virginia" focuses on a serious problem not only in Virginia but across the nation as a whole. As he states, and almost everyone finally agrees, the nation needs primary care physicians. However, does the nation need more internists and pediatricians or more family physicians? It is certainly true that there are many internists, practicing primary care of sorts, and what they do, most do quite well, but is this the type of primary care which the nation needs? Certainly their training is not directed toward the total, comprehensive type of primary care which we see as family physicians. It might also be added that until recently the general practitioner was not adequately trained to be a comprehensive primary physician. Following studies of many groups, beginning with the Mills Commission, there evolved the idea of the family practice residency program. These three year programs are geared to train the primary physicians which the country needs. Medical students have flocked to these programs and we look forward with anticipation for overwhelming public acceptance and gratitude for this new breed of physician.

We hear of another type of primary care physician—the internist, pediatrician, or the internist trained in pediatrics or vice-versa. Wouldn't it be better for organized medicine to concentrate on producing adequate numbers of family physicians as the primary physician and adequate internists and pediatricians who are *real* specialists? I mean someone whom the family physician can refer his cases who need a specialist's attention, i.e., cardiologists, hematologists, endocrinologists, neurologists, neonatologists, etc. Those who desire to do primary care can take the family practice residency program and those who really want to be specialists can start immediately in their subspecialty. Wouldn't this make medical practice more organized, really more specific and probably less expensive? What we have now is fragmentary medical care; people are choosing various types of physicians for their primary physicians, and no one physician is directing their care. When the patient doesn't know who to call or can't get any doctor, they end up in the hospital emergency rooms. (Has anyone noticed how much it costs to have a sore throat treated in our hospital emergency rooms?) Shouldn't the medical care flow be, with a few exceptions, from the family physician to the subspecialist, to the medical center rather than the present generally disorganized system?

With this concept in mind, Dr. Owens' five points make good sense with one exception. Instead of the need for residency places in Virginia for 75 family physicians and 75 internists and pediatricians, something like 125 family physicians and 25 subspecialists would be more appropriate.

Sincerely,

G. R. Smith, Jr., M.D.

June 5, 1974
Box 187
Shawsville, Virginia 24162

Boerhaave's Syndrome

To the Editor:

We have read with great interest the case report of Boerhaave's Syndrome as reported in your June, 1974 issue. We would like to commend the authors on the historical development and description of this interesting morbid emergency, as we believe they nicely covered this serious subject with succinct clarity.

We do, though, have one point to make, demonstrated nicely on our most recent patient with this problem, who was operated upon on 17 June at Richmond Memorial Hospital. Our patient was approached through the left chest, had primary closure of the perforation, extensive wide drainage of the entire mediastinum, without contamination of the peritoneal cavity. We consider the thoracic approach much more ideal for the above reason, considering the fact that almost all of these perforations are primarily confined to the mediastinum and thoracic cage initially. It appears to us that by exploring these patients through the abdomen, increased morbidity should, and does, occur because of contamination of the peritoneal cavity. Our feeling in this regard is supported by an article by Sampson, published in Surgery, Gynecology and Obstetrics in 1951.

Thanks very much for your consideration of this matter.

Sincerely yours,

William A. Robertson, M.D.
Owen Gwathmey, M.D.

July 11, 1974
5500 Monument Avenue
Richmond, Virginia 23226

Fitness at 40-Plus

Many people over 40 fight their own physical fitness. These are individuals who assume that because of their age they are no longer capable of much physical effort. One of the greatest dangers to men and women past 40 is falling into sedentary ways, either because of job confinement or sheer laziness.

The American Medical Association advises those past 40 to do two things with regard to physical exercise—

- If not reasonably adept at a specific sport —bowling, golf, tennis or swimming—take instruction in at least one of these or some other form of physical recreation.
- Take an inventory of physical activity in the course of the regular daily schedule. This includes on the job and at home. It might include such chores as housework, gardening and maintaining the home as well as sports. Often these do not provide enough physical activity.

For the sedentary person who decides to become more active, a good starting point is walking. This means a brisk posture walk, holding the belt line level and raising the breastbone. Then in addition to regular physical activities start devoting a part of the weekend to a pleasant physical activity like golf, bowling, dancing or swimming—something that is really enjoyable.

Fifteen minutes of regular exercise every other day is hardly enough to produce noticeable results quickly, but it is a good start. Over a period of time its benefits will be evident.

With regular exercise, the sagging, dragging, middle-ager may well begin to exhibit a total change in attitude. Meals are more enjoyable and there is more interest in the home. Even physical appearance is more vital.

For the person past 40 who decides to begin an exercise program, a visit to the physician for a physical examination is advisable, to make certain there are no conditions that would limit exertion.

Editorial....

Printing Costs and the State Medical Journals

A GREAT DEAL of today's mail appears to deal with unpleasant matters. If one turns to the newspapers or TV, the story is the same. Further inroads into private practice by governmental fiat is the order of the day; inflation goes steadily upward and the stock market goes steadily downward; Watergate fills the front page and photographs of Teddy Kennedy and bank robbers appear on the inside pages. Perhaps you sense that your Editor has been depressed recently.

The postman did bring one pleasant item this morning and the writer hastens to share it with our readers. The Virginia Medical Monthly is one of 34 state (and the District of Columbia) journals that subscribe to the State Medical Journal Advertising Bureau. This means that aside from local ads, the advertising that appears in the participating state journals is solicited, coordinated and distributed by the Bureau to the subscribing medical journals. This explains why similar advertisements appear each month in the majority of the various state medical publications.

The Bureau also serves as a clearing house for information concerning the participating medical journals. For instance, we find the VMM is one of 13 state journals that have adopted offset printing. Our readers may have noticed the slightly different appearance of the printed page during the past year. A matter of more interest to the Editorial Board is a recent tabulation of the number of pages in each state journal and the cost per page based on the January, 1974 issue. The Bureau pointed out that journals published in more populous states have larger press runs, which naturally is reflected in a lower cost per page. Surprisingly, the medical magazines of only eight states using the Bureau publish more copies per month than does the Virginia Medical Monthly. Nineteen publish fewer copies. This disproportion is due in part to the fact that several of the largest states, including California, New York and Illinois, use the services of other advertising agents.

The cost per copy of the VMM compares favorably with the majority of state journals—in fact only four cost less per copy. Despite the large circulation of the Texas journal, its cost per copy exceeds the Virginia Medical Monthly by more than one-third. The journal of the District of Columbia costs exactly twice as much as ours, but unquestionably Washington is an expensive city in which to live or publish a medical magazine. Only four state journals that subscribe to the Bureau print more pages per copy than the Virginia Medical Monthly.

The final test of economy in a publication is found in the cost per page. Twenty-eight state journals submitted sufficient data to permit comparisons and only the magazine of the Texas Medical Society fell below the per page cost of our journal. The Alaska publication, which appears by-monthly, understandably costs approximately four times as much per page as the VMM. So the frugality exemplified by the late Senator Byrd also pays off for medical publications, and the members of The Medical Society of Virginia receive both an economical and a well-printed journal. Now if our subscribers can receive their copies a little earlier in the month your Editor's headaches, journalistically speaking, will disappear and he, of necessity, will have to fall back on the problems enumerated in the first paragraph.

H. J. W.

The Other Side of Two Coins

TWO ITEMS OF INTEREST appear in this issue of the Virginia Medical Monthly.

The first deals with the National Health Service in Great Britain. The article entitled "The Doctor's Dilemma" (see page 718) was given as an address before the Southern Surgical Association at Hot Springs last December by Professor LeQuesne. Mr. LeQuesne is Chief of the Department of Surgical Studies in the Middlesex Hospital of London. In his erudite address the Professor has some kind things to say about the present British Health Service, and it is only right and proper for it to appear in the Virginia Medical Monthly for rather harsh appraisals of the British system have been made from time to time in this journal.

The second item is this month's guest editorial by Dr. Harry C. Kuykendall of Alexandria, who currently is Vice-Councilor of the Eighth District and President of the Northern Virginia Medical Society. Dr. Kuykendall's thoughts concerning PSRO are not shared by all members of The Medical Society of Virginia but perhaps this lack of general enthusiasm makes it especially desirable to publish his article. Possibly he will convert, or at least reconcile more members of the Society to his point of view.

H. J. W.

News....

Calendar of Events

Walter L. Thomas Symposium on Gynecologic Malignancy and Surgery—Duke University Medical Center—Durham, North Carolina—September 20-21, 1974.

Virginia Thoracic Society—Annual Meeting—Holiday Inn/Scope—Norfolk—September 27, 1974.

Cardiac Arrhythmias—Electrophysiological Concepts—Sponsored by Virginia Heart Institute—Blue Cross-Blue Shield Building—Richmond—September 27, 1974.

Virginia Gastroenterology Society—Annual Meeting—The Mariner—Virginia Beach—September 28-29, 1974.

AMA National Conference of State Medical Association Representatives on Continuing Medical Education—Drake Hotel—Chicago—October 2-3, 1974.

Conference on Children with Learning Disabilities—Sponsored by Virginia Council on Health and Medical Care—Hotel Roanoke—Roanoke—October 6-8, 1974.

American Cancer Society, Virginia Division—Hotel Roanoke—Roanoke—October 10-11, 1974.

Virginia Association for Mental Health—Boar's Head Inn—Charlottesville—November 1-2, 1974.

The Medical Society of Virginia—Annual Meeting—Williamsburg—November 3-6, 1974.

Virginia Hospital Association—The Homestead—Hot Springs—November 7-8, 1974.

American Association for Clinical Immunology and Allergy—Annual Meeting—Pier 66—Ft. Lauderdale, Florida—November 21-24, 1974.

AMA Clinical Meeting—Portland, Oregon—November 30-December 4, 1974.

Air Pollution Medical Research Conference—Sponsored by AMA—Sheraton Palace Hotel—San Francisco—December 5-6, 1974.

Problems of Cortical Function—Sponsored by Division of Pediatric Neurology of the University of Virginia, Medical College of Virginia and King's Daughters' Hospital—Cascades Convention Center—Williamsburg—December 6-8, 1974.

National Conference on Rural Health—Sponsored by American Medical Association—Hotel Roanoke—Roanoke—March 20-21, 1975.

* * * * * * * *

The Medical Society of Virginia maintains a registry of medical meetings and programs of interest to Virginia physicians. You can help by keeping us advised of any meetings scheduled in your area. This will not only help others avoid conflicts but also provide helpful information on opportunities for continuing education.

New Members.

The following members were received into The Medical Society of Virginia during the month of June:

Victor F. Albright, M.D., Winchester
Benjamin Randolph Allen, Jr., M.D., Richmond
Nakorn Apakupakul, M.D., Windsor
Frank R. Barrera, M.D., Winchester
Emanuel Charles Beyer, M.D., South Hill
William David Bishop, M.D., Virginia Beach
Edwin Treakle Brownley, M.D., Norfolk
Cesar Scerla Calilung, M.D., Narrows
Richard E. Carlson, M.D., Norfolk
Rodolfo B. Ceballos, M.D., Pulaski
Victoria M. Ceballos, M.D., Pulaski
Thomas F. Crompton, M.D., Leesburg
Gisela Annamarie Dengel, M.D., Front Royal
Stephen Lawrence Ferlazzo, M.D., Woodbridge
Marcella F. Fierro, M.D., Richmond
Fredric Bruce Garner, M.D., Fredericksburg
Roger Vincent Gisolfi, M.D., Falls Church
Roger Thorpe Gregory, M.D., Norfolk
Howard Michael Hanna, Jr., M.D., Fort Defiance
Eugene Jutson Harper, M.D., Harrisonburg
Earl D. Hearst, M.D., Norfolk
Earl Maxwell Hudgins, M.D., Richmond
Furadoon Adi Irani, M.D., Front Royal
Robert Wayne Jacey, M.D., Richmond
Pothen Jacob, M.D., Portsmouth
Woon Hi Koh, M.D., Hampton
Richard Jay Leonard, M.D., Richmond
Michael Maurice Lieber, M.D., Reston
John William Lyles, M.D., Annandale
John Philip Mamana, M.D., Fairfax
Kenneth Lee Mayes, M.D., Chesapeake
Roger Alfred Noel, M.D., Fairfax
Edward Benjamin Ostroff, M.D., Portsmouth
Jerry S. Patey, M.D., Hampton
Harry Emerson Poling, M.D., Winchester
Seymour Rabinowitz, M.D., Charlottesville
Michael John Reilly, M.D., Harrisonburg
David Haydon Riddick, M.D., Richmond
Norris Aaron Lorenza Royston, Jr., M.D., Marshall
Mary Anna Rushia, M.D., Charlottesville
Sadik Sarraf, M.D., Pulaski
Wayne David Seipel, M.D., Front Royal
Alfredo Lopez Soyangco, M.D., Danville
Ronald Wilson Snead, M.D., Richmond
Charles Lee Swisher, II, M.D., Alexandria
John Brantley Sydnor, M.D., Charlottesville
Filemon DeJesus Umali, M.D., Wytheville
Ranganathan Venkatesan, M.D., Hampton
John Robert Wenger, Jr., Bedford
Wallace James Werner, M.D., Manassas
Amos J. Willis, M.D., Elkwood
Daniel Gene Witmer, M.D., Harrisonburg
David Herbert Zontine, M.D., Winchester

Dr. James M. Moss,

Alexandria, has been appointed to the Endocrine and Metabolic Advisory Committee of the Food and Drug Administration. He is chairman of the Pharmaceuticals Committee of the American Society of Internal Medicine and is also a member of the Practitioner Review Panel for the *Evaluation of Drug Interactions* published by the American Pharmaceutical Association.

Dr. Wyndham B. Blanton, Jr.,

Richmond, has been reappointed Rector of the Board of Visitors of Virginia Commonwealth University. He has served on the Board since 1969.

Dr. Maynard T. Smith,

Richmond, has been certified as a Diplomate of the American Board of Allergy and Immunology. He has been a Diplomate of the American Board of Otolaryngology for a number of years.

Distinguished Service Certificates.

The Virginia Nursing Home Association has presented Distinguished Service Certifi-

cates to Dr. Thomas G. Bell, Staunton, and Dr. Edwin M. Brown, Richmond.

Appointments By Governor.

Governor Mills E. Godwin, Jr., has appointed the following members of The Medical Society of Virginia to the Advisory Committee on Emergency Medical Services as enlarged by the 1974 General Assembly: Dr. Boyd W. Hayes, Richmond; Dr. Charles H. Townes, Petersburg; Dr. Robert J. Robertson, Jr., Virginia Beach; Dr. William J. Weaver, Jr., Alexandria; Dr. Carl E. Stark, Wytheville; Dr. Malcolm Tenney, Jr., Staunton; Dr. Leslie E. Rudolf, Charlottesville; and Dr. John S. Thiemeyer, Jr., Norfolk.

The Association of American Medical Colleges

Issued a report which urges much tighter standards for licensing foreign medical graduates to practice in this country. An AAMC task force said FMGs perform at a lower level than graduates of American medical schools and declared that "this country should not depend for its supply of physicians to any significant extent on the immigration of FMGs or on the training of its own citizens in foreign medical schools. The chairman of the task force is Dr. Kenneth R. Crispell, vice-president for health affairs of the University of Virginia.

Problem Patients in Medical Practice.

The School of Medicine, Medical College of Virginia, Departments of Psychiatry and Family Practice will present a post-graduate course on October 2nd. Topics to be discussed are Adolescent Problems in Primary Care by Dr. Fitzhugh Mayo; Child Abuse Revisited by Dr. David W. Marsland; The Primary Physician and Terminal Illness by Dr. James L. Mathis; and The Geriatric Patient by Dr. Eric Pfeiffer. Drs. Mathis and Mayo are on the faculty of the College, Dr. Marsland is from the Riverside Hospital, Newport News and Dr. Pfeiffer is from Duke University, Durham, North Carolina.

Five prescribed hours by the American Academy of Family Physicians have been applied for.

Staff Physician.

One admitting physician for night tour; one physician to work in the Ambulatory Care Service of a large active GM&S hospital, affiliated with the University of Virginia Medical School. Hospital adjoins the city of Roanoke on a 266-acre site in the beautiful Roanoke Valley between the Alleghany and Blue Ridge Mountains, with a valley population of approximately 250,000. Requires permanent visa or U. S. citizenship. Salary dependent upon qualifications. Equal Opportunity Employer. Contact chief of staff, VA Hospital, Salem, Virginia 24153. Telephone 703-344-2021, Ext. 252. (*Adv.*)

General Practitioner Needed

For Virginia Penitentiary in Richmond. Full time or part time. Negotiable salary and excellent benefits. Contact Department of Corrections, Recruitment Supervisor, 429 South Belvidere Street, Richmond, Virginia 23220. Phone 804-770-2461. An Equal Opportunity Employer. (*Adv.*)

Obituary . . . .

Dr. Allen Tupper Hawthorne,

Winchester, died March 17. He was eighty years of age and received his medical degree from the University of Virginia in 1918. Dr. Hawthorne had been a member of The Medical Society of Virginia for fifty-two years and was a member of the Fifty Year Club.

His wife survives him.

Dr. Robert Carl Bunts,

Richmond, died July 28 after a long illness. He was a native of Pulaski and sixty-seven years of age. Dr. Bunts received his medical education at the Medical College of Virginia, graduating in 1931. He was chief of urology at McGuire Veterans Administration Hospital and a clinical professor of urology at the Medical College of Virginia. Dr. Bunts practiced in West Virginia and North Carolina and entered the Army Medical Corps in 1942, serving as chief of urology at the 147th General Hospital in Honolulu. He came to McGuire Hospital in 1946. Dr. Bunts was a past president of the Virginia Urological Society and the Mid-Atlantic Section of the American Urological Society. He had been a member of The Medical Society of Virginia since 1948.

His wife survives him.

Dr. Jean Florence Henry Rooney,

Richmond, died July 27 at the age of fifty-one. She was a native of Scotland and educated in England. Dr. Rooney was a physician at Richmond Memorial Hospital in 1964 and 1965 when she joined the Research Department of A. H. Robins. She remained there until 1971 when she returned to Richmond Memorial Hospital. Dr. Rooney was a member of The Medical Society of Virginia.

She is survived by her husband, Dr. Mervyn S. C. Rooney and six children.

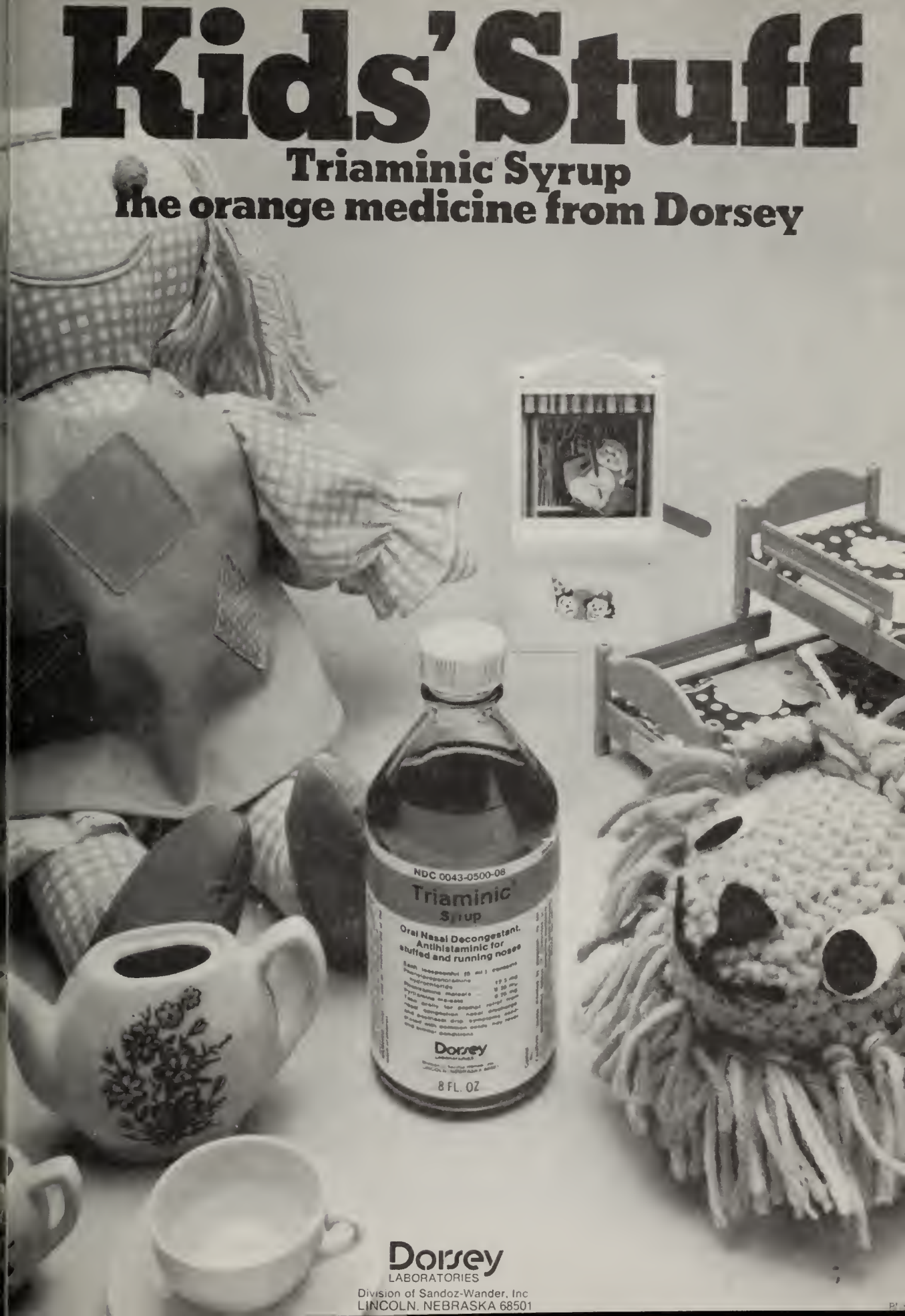
Dr. Martin Abraham Hoffman,

Richmond, died August 2. He was 54 years of age and a native of North Carolina. Dr. Hoffman graduated from the University of Rochester Medical School in 1951 and located for practice in Richmond in 1954. He was clinical professor of pediatrics at the Medical College of Virginia. Dr. Hoffman had been a member of The Medical Society of Virginia for eighteen years.

His wife, a daughter and a son survive him.

Kids' Stuff

Triaminic Syrup
The orange medicine from Dorsey



Dorsey
LABORATORIES
Division of Sandoz-Wander, Inc
LINCOLN, NEBRASKA 68501

STUART CIRCLE HOSPITAL

413-21 Stuart Circle RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.
Frank M. Blanton, M.D.
William W. Martin, Jr., M.D.
James R. Wickham, M.D.

Obstetrics and Gynecology:
Spotswood Robins, M.D.
David C. Forrest, M.D.
Joseph C. Parker, M.D.
William M. Oppenhimer, M.D.

Orthopedics:
Beverley B. Clary, M.D.
James B. Dalton, Jr., M.D.
Franklin P. Watkins, M.D.

Pediatrics:
Edward G. Davis, Jr., M.D.
Thomas P. Overton, M.D.
Albert S. Thompson, Jr., M.D.
Edward J. Wiley, M.D.

Roentgenology and Radiology:
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.
James W. Proffitt, M.D.

Anesthesiology:
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.
Armistead M. Williams, M.D.
James R. Darden, Jr., M.D.
Wyatt S. Beazley, III, M.D.

Urological Surgery:
Frank Pole, M.D.
Harry S. Rowland, Jr., M.D.

Plastic Surgery:
Hunter S. Jackson, M.D.

Ophthalmology, Otolaryngology:
Richard W. Dodd, M.D.
J. Warren Montague, M.D.

Pathology:
W. Scott Gilmer, Jr., M.D.

Physical Therapy:
William J. Cowan, R.P.T.

Director:
Charles C. Hough

ST. LUKE'S HOSPITAL

Established 1882
Hunter H. McGuire, M.D.

McGUIRE CLINIC, Inc.

Established 1923
Stuart McGuire, M.D.

1000 West Grace Street
Richmond, Virginia

General Surgery & Gynecology
Joseph W. Coxe, III, M.D.
H. Fairfax Conquest, M.D.
Gilbert H. Bryson, M.D.
William M. Crouch, M.D.

Anesthesiology
Beverley Jones, M.D.

Physical Therapy
Elizabeth L. Watson, R.P.T.

Internal Medicine
John P. Lynch, M.D.
John B. Catlett, M.D.
Robert W. Bedinger, M.D.
David L. Litchfield, M.D.
Burness F. Ansell, Jr., M.D.
W. Wayne Key, Jr., M.D.
Randolph M. Halloran, M.D.
Hilton R. Almond, M.D.
James A. Repass, M.D.

Radiology
Henry S. Spencer, M.D.
Donald P. King, M.D.

Isotopes
David L. Litchfield, M.D.

Pathology
Hubert R. White, Jr., M.D.

Hospital Administrator
Gerald J. LaGesse

Director of Nurses—St. Luke's Hospital
Ann M. Urbine, R.N.

School of Nursing
Ann M. Urbine, R.N., Director
Joan B. Hovis, R.N., Dir. of Ed.
Elizabeth H. Ellett, R.N., Instructor

Clinic Manager
S. Taylor Ware, Jr.

Director of Nurses—McGuire Clinic, Inc.
Mary E. Simmons, R.N.

TUCKER HOSPITAL Inc.

212 West Franklin Street

Richmond, Virginia

A private hospital for diagnosis and treatment of psychiatric and neurological disorders. Hospital and out-patient services.

James Asa Shield, M.D.
George S. Fultz, Jr., M.D.
Catherine T. Ray, M.D.

Weir M. Tucker, M.D.
James Asa Shield, Jr., M.D.

Tidewater Psychiatric Institute

1701 Will-O-Wisp Drive
Virginia Beach, Virginia 23454

and

1005 Hampton Boulevard
Norfolk, Virginia 23507

Private hospitals for the treatment of psychiatric disorders of adults and adolescents, alcoholism, and drug addiction. Residential special education for emotionally disturbed adolescents.

David C. Butler
Administrator

Julian W. Selig, Jr., M.D.
Hospital Director, Norfolk

Stuart Ashman, M.D.
Hospital Director, Virginia Beach

(Brochure sent on request)

Fourth Decade of Nursing

Accredited by the Joint Commission on Accreditation and Certified for Medicare

MRS. PLYLER'S NURSING HOME

KATE E. PLYLER (1876-1947) GENE CLARK REGIRER (1912-1962)

A private nursing home dedicated to extended, intermediate and custodial care

1615 Grove Avenue, Richmond, Virginia, Telephone 353-3981

Pulaski

Home For Adults

★ Newly remodeled and decorated
★ Private & semi-private rooms
★ Assistant on duty 24 hours a day
★ Medical facilities near by
★ Reasonable rates, $250 & up.

Write or phone for further information: P.O. Box 938, Pulaski, Va. 24301 or phone 980-2200.

Russ Penner,
Business Manager

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

who goes for checkups?

In a recent survey, 90% of patients said they would have annual checkups *if their physicians told them to do so.* This confirmed what we have long known—your key role, doctor, in motivating your patients to follow good health practices. We alert the public with facts about cancer. You follow through by urging regular checkups. A life-saving combination.

American Cancer Society

ANNOUNCING THE OPENING OF

THE WADDELL CENTER

for Alcohol and Related Problems

112 Painter Street 703 236-2994

GALAX, VIRGINIA 24333

Walter K. Helton, M.Div., Director

- Twenty-Eight day residential program
- Services for men & women
- Detoxification available
- Telephone consultation encouraged
- Quiet neighborhood on the rim of the Blue Ridge

SAINT ALBANS

PSYCHIATRIC HOSPITAL

Radford, Virginia

STAFF:

William D. Keck, M.D.
Morgan E. Scott, M.D.
David S. Sprague, M.D.
Delano W. Bolter, M.D.
Edward E. Cale, M.D.
Terkild Vinding, M.D.
James P. King, M.D. (Emeritus)

Clinical Psychology:

Thomas C. Camp, Ph.D.
Carl McGraw, Ph.D.
Allen S. Rowe, Ph.D.

George K. White
Administrator
Richard A. Kennedy, Jr.
Asst. Administrator

BAYBERRY PSYCHIATRIC HOSPITAL

HAMPTON, VIRGINIA

Bayberry is a 125 bed private hospital which offers a wide range of inpatient, day care, outpatient, and consultative services, as well as treatment programs for adolescents, children, and alcoholics.

TREATMENT

After a comprehensive medical and psychiatric evaluation, each patient receives an individualized treatment program and schedule of activity therapies. Treatment may include individual therapy, group therapy, psychodrama, chemotherapy, electroconvulsive or insulin treatment.

EDUCATION

A regular school curriculum is followed and academic credit is given. The Hampton Roads Reading Center is located within the hospital and provides special instruction for children with dyslexia and other learning problems.

REHABILITATION

Rehabilitation services include individual counseling, special education, and job training programs.

ACCREDITATION

Accredited by the Joint Commission on Accreditation of Hospitals, approved for Medicare, member of the American Hospital Association, and licensed by the State Department of Hospitals and Mental Hygiene.

WENDELL J. PILE, M.D.
Medical Director

HOWARD L. COX, M.D. BASIL E. ROEBUCK, M.D. JONATHAN G. SOLOMON, M.D., LTD.

BROCHURE SENT ON REQUEST
Contact: Medical Director, 530 E. Queen Street, Hampton, Va. 23369
Telephone (804) 722-2504

Westbrook

Psychiatric Hospital, Inc.

Richmond, Virginia

FOUNDED 1911

PSYCHIATRY

REX BLANKINSHIP, M. D.
Chairman, Advisory Group

JOHN R. SAUNDERS, M. D.
Medical Director

THOMAS F. COATES, JR., M. D.
Assistant Medical Director

OWEN W. BRODIE, M. D.
Associate in Psychiatry

M. M. VITOLS, M. D.
Associate in Psychiatry

NEUROLOGY

GERALD W. ATKINSON, M. D.
Associate in Neurology

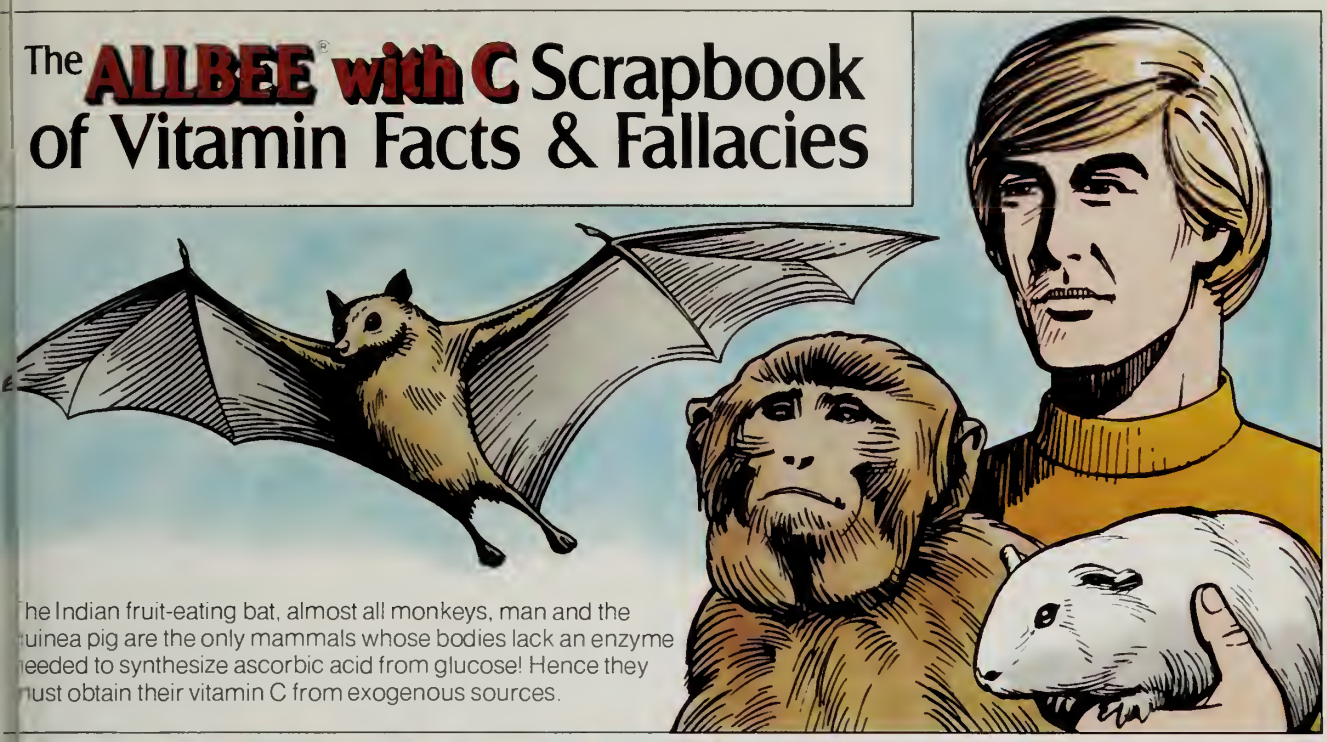
CHILD PSYCHIATRY

GILBERT SILVERMAN, M. D.
Associate in Child Psychiatry

ADMINISTRATION

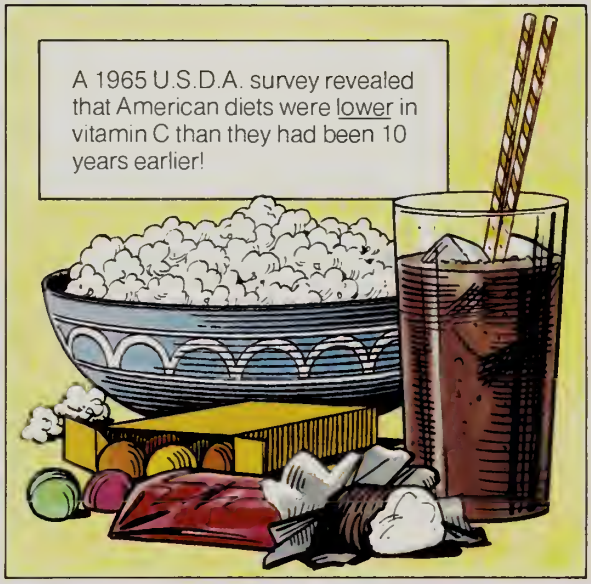
H. R. WOODALL
Administrator

The ALLBEE® with C Scrapbook of Vitamin Facts & Fallacies



he Indian fruit-eating bat, almost all monkeys, man and the uinea pig are the only mammals whose bodies lack an enzyme eeded to synthesize ascorbic acid from glucose! Hence they ust obtain their vitamin C from exogenous sources.

e Joinville writing about a 13th century crusade reported that arber surgeons had to "cut away the dead flesh from the gums enable people to masticate their food." The disease he escribed was probably scurvy.



he outer leaves of cabbage and brussels sprouts contain more tamin C than the heads. Yet, ironically, these are often trimmed way by the grocer to improve appearance and enhance sales ppeal! Many housewives trim them even more before cooking!

Available on your prescription or recommendation

ALLBEE® with C

High Potency B-Complex and Vitamin C Formula

A.H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Spasm reactor?

Donnatal®!

	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	(¼ gr.) 16.2 mg	(½ gr.) 32.4 mg	(¾ gr.) 48.6 mg.
(warning: may be habit forming)			

Brief summary. Adverse Reactions: Blurring of vision, dry mo difficult urination, and flushing or dryness of the skin may occu higher dosage levels, rarely on usual dosage. Contraindicati Glaucoma; renal or hepatic disease; obstructive uropathy (fo ample, bladder neck obstruction due to prostatic hypertroph hypersensitivity to any of the ingredients.

A·H·ROBINS A H Robins Company Richmond Virginia 23

ESTABLISHING A PROFESSIONAL CORPORATION OR INTERESTED IN A KEOGH ACT PLAN?

The Medical Society of Virginia Members' Retirement Plans Are Flexible and Innumerable

FOR INFORMATION CALL OR WRITE:

The Medical Society of Virginia
Members' Retirement Plan

Suite 503, 2425 Wilson Boulevard
ARLINGTON, VIRGINIA 22201
703/525-6700 (collect calls accepted)

REPRINT PRICES OF ARTICLES IN THE VIRGINIA MEDICAL MONTHLY

NEW PRICES EFFECTIVE JANUARY, 1974

Trim Size: 8¼ x 11 Inches

No. of Copies	100	200	250	500	750	1000	1500	2000
1 page	$ 9.95	$10.70	$11.05	$12.85	$14.65	$16.45	$20.05	$23.65
2 pages	11.35	12.25	12.70	14.95	17.20	19.45	23.95	28.45
4 pages	23.80	26.05	27.20	32.70	38.25	43.80	54.90	66.00
8 pages	55.05	57.65	59.00	65.55	72.10	78.65	91.75	104.90
12 pages	89.60	95.05	97.80	111.45	125.10	138.75	166.05	193.35
16 pages	110.10	115.35	118.00	131.10	144.20	157.30	183.55	209.75
Cover	18.25	22.40	24.50	34.80	44.95	55.50	88.20	96.90
Envelope—blank	3.35	6.70	8.40	16.80	25.20	33.60	50.40	67.20
Envelope—printed	9.60	13.40	15.25	24.85	34.30	43.90	63.00	82.10

PRICES F.O.B. RICHMOND, VA.

Orders Must Be Placed Before Type Is Distributed

THE WILLIAMS PRINTING CO.

5203 Hatcher Street P.O. Box 1419 Richmond, Virginia 23211

A resource for therapies, including a school for emotionally disturbed children

The Human Resource Institute of Norfolk offers individualized treatment programs within a therapeutic community to all ages and diagnostic categories of mentally and emotionally disturbed adults, adolescents, and children. By utilizing various individual and group therapies the patient becomes aware of his own feelings and his relationship to others. The diversified therapies increase the individual's self-esteem and encourage him to function in an effective manner.

An intensive program of community activities offered through the Creative Services Department promotes interpersonal relationships among patients and staff, and stimulates the patient's creative potential. Activities such as dance therapy, recreational therapy, occupational therapy, psychodrama, music therapy, and personal appearance therapy are individualized according to the patient's needs.

An integral part of treatment for the emotionally disturbed adolescent or child is the continuance of his education in a therapeutically controlled environment. HUMAN RESOURCE ACADEMY, a fully licensed and certified school, promotes learning with teachers specially trained in teaching the emotionally disturbed and learning disabled students.

Pharmaceutical therapy and close association with consultant physicians of all specialities are important aspects of patient care at Human Resource Institute.

To find out more about our comprehensive program contact the Co-Medical Directors, Dietrich W. Heyder, M.D., F.A.P.A., or Fathy A. Abdou, M.D., F.A.P.A., Human Resource Institute of Norfolk, Human Resources Building, 100 Kingsley Lane, Norfolk, Virginia 23505. Phone (804) 489-1072.

for your information...
Peoples Drug Stores stocks
the complete assortment of

Almay Hypo-Allergenic Cosmetics

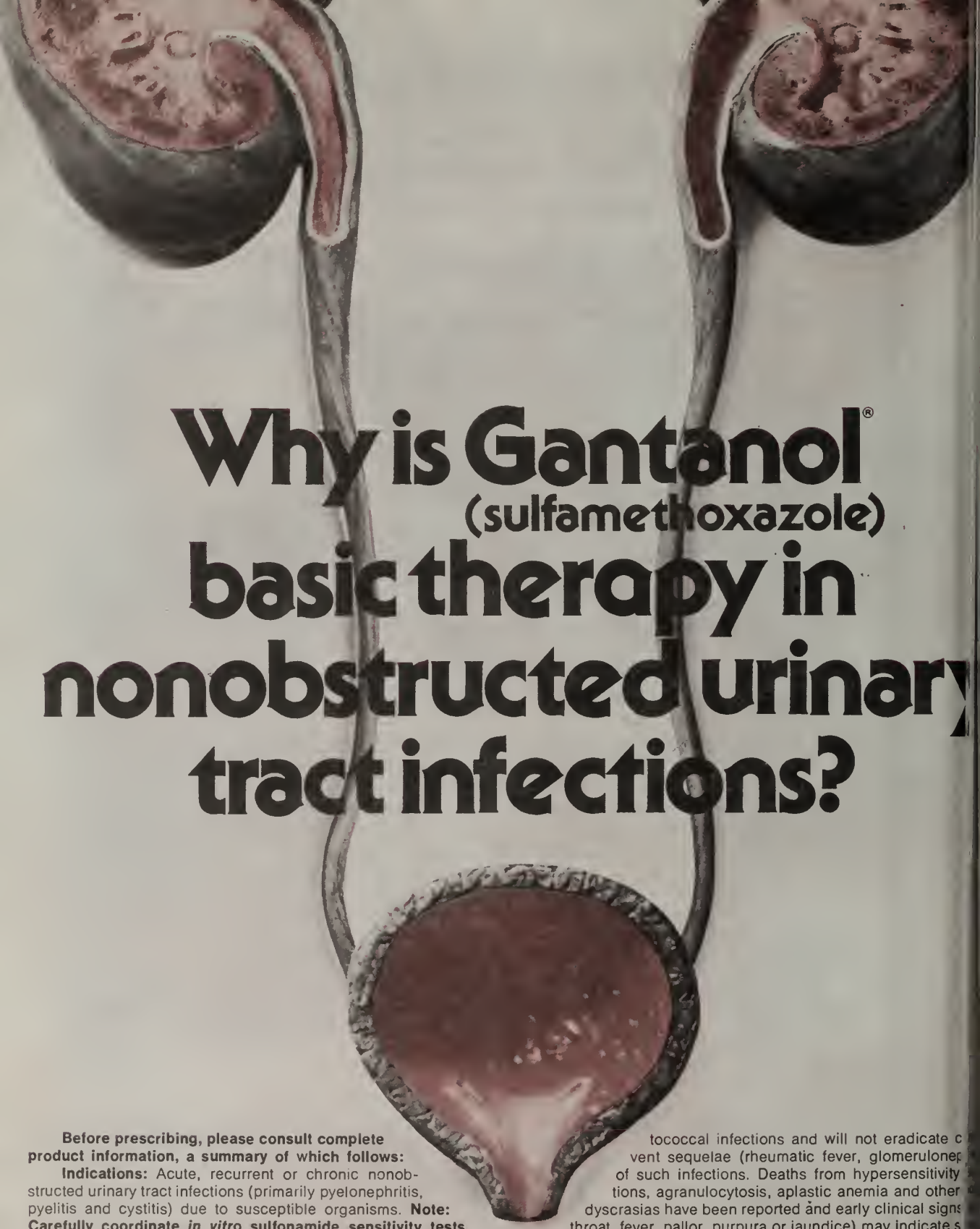
So you're not allergic to makeup. Why take chances? Almay hypo-allergenic cosmetics are so pure they make your world seem lots cleaner. And so fashionable they make you feel like a born leader. A world of beautiful eye makeups in the cleanest greens, the purest plums, the clearest blues. Pure Beauty Face Makeup, to create a soft, glowy complexion that looks born to you.

Dozens of delicious, stainlessly pure Color-Moist Lipsticks. High-Frost Nail Enamels, dazzling *and* dermatologist recommended. Deep Mist total skincare, because skin is where pure begins. (If you're a one-cream woman, you can't do better than Deep Mist Moisture Cream to cherish you day and night.)

Come see the Almay Collection. Everything fashion-lovers dream of. Only purer. Think pure. Think Almay, world's leading authority in hypo-allergenic cosmetics.

At the purity place . . .

PEOPLES® DRUG STORES



Why is Gantanol® (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic strep-

tococcal infections and will not eradicate c
vent sequelae (rheumatic fever, glomerulonep
of such infections. Deaths from hypersensitivity
tions, agranulocytosis, aplastic anemia and other
dyscrasias have been reported and early clinical signs
throat, fever, pallor, purpura or jaundice) may indicate s
blood disorders. Frequent CBC and urinalysis with micro
examination are recommended during sulfonamide therapy. I
cient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired re
hepatic function, severe allergy, bronchial asthma; in gluc
phosphate dehydrogenase-deficient individuals in whom
related hemolysis may occur. Maintain adequate fluid int
prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis,
tic anemia, thrombocytopenia, leukopenia, hemolytic anemi

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy

Gantanol®

(sulfamethoxazole)

Tablets/Suspension
(0.5 Gm) (0.5 Gm/teasp.)

, hypoprothrombinemia and methemoglobinemia); *allergic tions* (erythema multiforme, skin eruptions, epidermal necroly- urticaria, serum sickness, pruritus, exfoliative dermatitis, ana- actoid reactions, periorbital edema, conjunctival and scleral tion, photosensitization, arthralgia and allergic myocarditis); *ointestinal reactions* (nausea, emesis, abdominal pains, hepa- diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* dache, peripheral neuritis, mental depression, convulsions, a, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous tions* (drug fever, chills, toxic nephrosis with oliguria and ia, periarteritis nodosa and L.E. phenomenon). Due to certain ical similarities with some goitrogens, diuretics (acetazola- , thiazides) and oral hypoglycemic agents, sulfonamides have ed rare instances of goiter production, diuresis and hypogly- a as well as thyroid malignancies in rats following long-term nistration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

For the Discriminating
Eye Physician

Depend on the Services of a
Guild Optician

IN LYNCHBURG, VA.

A. G. JEFFERSON
INC.

Main Office
Allied Arts Buildings

Branch Office
2010 Tate Springs Road

REGISTERED OPTICIANS

WE DO NOT PRESCRIBE GLASSES—
WE MAKE THEM

The Medical Society
of Virginia

ANNUAL MEETING

Williamsburg

November 3-6, 1974

'CIRCUBID'™
(Ethaverine HCl–150 mg.)
Time Disintegrating Capsules

Caution: Federal law prohibits dispensing without prescription.

Each Capsule* contains: Ethaverine HCl. 150 mg.

ACTION: Ethaverine HCl. acts directly on the smooth muscle cells without involving the autonomic nervous system or its receptors.

INDICATIONS: In peripheral and cerebral vascular insufficiency associated with arterial spasm, in spastic conditions of the gastro-intestinal and genitourinary tracts.

CONTRAINDICATIONS: Contraindicated in the presence of complete atrioventricular dissociation.

PRECAUTIONS: It should be administered with caution in patients with glaucoma. It should not be used in pregnant women or in women of childbearing age unless directed by a physician.

ADVERSE REACTIONS: Even though the incidence of side effects as reported in literature is very low, it is possible for a patient to evidence nausea, anorexia, abdominal distress, dryness of the throat, hypotension, flushing, sweating, vertigo, respiratory depression, cardiac depression, cardiac arrhythmia and headache. If these side effects occur, reduce dosage or discontinue medication.

DOSAGE: The usual adult dose is 300 mg. daily, one capsule every 12 hours. In more difficult cases the dosage may be increased to 600 mg. daily as determined by the physician. It is most effective given early in the course of the vascular disorder. Because of the chronic nature of the disease long term therapy is required.

*Manufactured to provide a prolonged therapeutic effect.

HOW SUPPLIED: Bottles of 100 and 1000

W. F. MERCHANT
PHARMACEUTICAL CO., INC.
Warrenton, Virginia 22186

"In a good old age."
—GENESIS 15:5

'CIRCUBID'™
(Ethaverine HCl)
150 mg. Capsules

W.F. MERCHANT PHARMACEUTICAL CO., INC.
4 SOUTH THIRD ST. • P. O. BOX 527 • WARRENTON, VIRGINIA 22186

OFFICERS AND COUNCILORS OF THE MEDICAL SOCIETY OF VIRGINIA 1973-1974

President—John A. Martin, M.D., Roanoke *President-Elect*—William R. Hill, M.D., Richmond
Past-President—Carl E. Stark, M.D., Wytheville
Vice-Presidents—1st: Raymond S. Brown, M.D., Gloucester 2nd: James C. Respess, M.D., Charlottesville
3rd: James S. Kitterman, M.D., Norfolk

Executive Vice-President—Robert I. Howard, Richmond
State Commissioner of Health—Mack I. Shanholtz, M.D., Richmond
Editor, "Virginia Medical Monthly"—Harry J. Warthen, M.D., Richmond
Speaker of the House—William J. Hagood, Jr., M.D., Clover
Vice Speaker—K. K. Wallace, Jr., M.D., Virginia Beach

COUNCILORS	(District)	VICE-COUNCILORS
Harold L. Williams, M.D., Newport News	1st	Walter A. Eskridge, M.D., Parksley
Charles E. Davis, Jr., M.D., Norfolk	2nd	Gervas S. Taylor, Jr., M.D., Norfolk
Carrington Williams, Jr., M.D., Richmond	3rd	Charles M. Caravati, Jr., M.D., Richmond
George J. Carroll, M.D., Suffolk	4th	Gordon G. Birdsong, M.D., Franklin
Girard V. Thompson, Sr., M.D., Chatham	5th	Anthony J. Munoz, M.D., Farmville
H. C. Alexander, III, M.D., Roanoke	6th	Douglas E. Pierce, M.D., Roanoke
George M. Nipe, M.D., Harrisonburg	7th	Harry L. Westfall, Jr., M.D., *Fredericksburg*
Thomas L. Lucas, M.D., Alexandria	8th	Harry C. Kuykendall, M.D., Alexandria
James Hal Smith, M.D., Christiansburg	9th	Joseph H. Early, Jr., M.D., Hillsville
W. Leonard Weyl, M.D., Arlington	10th	C. Barrie Cook, M.D., Fairfax

DELEGATES AND ALTERNATES TO AMERICAN MEDICAL ASSOCIATION

Delegates—1973-1974
W. Callier Salley, M.D., Gloucester Point

1974-1975
William S. Hotchkiss, M.D., Norfolk
Michael A. Puzak, M.D., Arlington

Alternates—1973-1974
Percy Wootton, M.D., Richmond

1974-1975
F. Ashton Carmines, M.D., Newport News
Carl E. Stark, M.D., Wytheville

INDEX TO ADVERTISERS

Abbott Laboratories ---- 704
A. H. Robins ---- 817, 818
American Cancer Society ---- 815
Bayberry Psychiatric Hospital ---- 816
Burroughs-Wellcome ---- 709
Commercial Insurance ---- 705
David Dyer Ins. ---- 695
Dorsey Laboratories ---- 699, 811
Flint Laboratories ---- 745
Human Resources Institute of Norfolk ---- 820
Jefferson, A. G. ---- 824
Johnston-Willis Hospital ---- 814
Eli Lilly and Co. ---- 714
McNeil Laboratories, Inc. ---- 713
Medical Society of Virginia, The ---- 824
W. F Merchant Pharmaceutical Co. ---- 824, 825
Merck, Sharp & Dohme ---- 696-697, 698
Oriental Rugs ---- 708
People's Service Drug Stores ---- 821
Pharmaceutical Manufacturers Assn. ---- 748, 749
Plyler's Nursing Home, Mrs. ---- 814
Pulaski Home ---- 814
Reed & Carnrick ---- 711
Retirement Plan ---- 819
Roche Laboratories ---- 2nd Cover, 693, 702-703, 706-707, 822-823, 3rd and 4th Covers
Saint Alban's Psychiatric Hospital ---- 815
Searle ---- 746-747
St. Luke's Hospital ---- 812
Stanmar, Inc. ---- 700
Stuart Circle Hospital ---- 812
Tennessee Valley Medical Authority ---- 712
Tidewater Psychiatric Institute ---- 813
Tucker Hospital, Inc. ---- 813
Virginia National Bank ---- 710
Waddell Center ---- 815
Wallace Pharmaceuticals ---- 700, 701
Westbrook Psychiatric Hospital ---- 816
Williams Printing Company ---- 819

OFFICIAL PUBLICATION
OF THE
MEDICAL SOCIETY
OF VIRGINIA

THE FRANCIS A. COUNTWAY
BOSTON

Virginia Medical Monthly

October, 1974 Volume 101

Both ofter

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in f and/or severity of grand mal seiz require increased dosage of stan convulsant medication; abrupt w may be associated with temporar crease in frequency and/or seve seizures. Advise against simultar gestion of alcohol and other CNS sants. Withdrawal symptoms (sir those with barbiturates and alcol occurred following abrupt discor (convulsions, tremor, abdomina cle cramps, vomiting and sweati addiction-prone individuals und

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

NOV 6 1974

espond to one

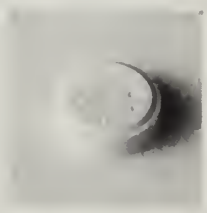
ccording to her major
toms, she is a psychoneu-
patient with severe
ity. But according to the
ption she gives of her
igs, part of the problem
ound like depression.
ss because her problem,
ugh primarily one of ex-
e anxiety, is often accom-
id by depressive symptom-
cy. Valium (diazepam)
ovide relief for both—as
ecessive anxiety is re-
e, the depressive symp-
associated with it are also
relieved.

here are other advan-
n using Valium for the
gement of psychoneu-
nxiety with secondary
ssive symptoms: the
otherapeutic effect of
n is pronounced and
This means that im-
ment is usually apparent
patient within a few
ather than in a week or
two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

ance because of their predisposi-
habituation and dependence. In
ncy, lactation or women of child-
g age, weigh potential benefit
r possible hazard.

tions: If combined with other psy-
pics or anticonvulsants, consider
ly pharmacology of agents em-
e drugs such as phenothiazines,
cs, barbiturates, MAO inhibitors
er antidepressants may potentiate
on. Usual precautions indicated in
s severely depressed, or with latent
sion, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April, 1874)

PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF VIRGINIA

4205 DOVER ROAD, RICHMOND, VIRGINIA 23221

EDITORIAL BOARD

HARRY J. WARTHEN, M.D.
Chairman and Editor

H. LAMONT PUGH, M.D.

C. V. CIMMINO, M.D.

JOHN A. OWEN, JR., M.D.

GORDON W. JONES, M.D.

WILLIAM H. KAUFMAN, M.D.

ROBERT MITCHELL, JR., M.D.

W. LEONARD WEYL, M.D.

FRED J. SPENCER, M.D.

ROBERT L. CASSIDY, M.D.

E. SPENCER WATKINS
Managing Editor
4205 Dover Road
Richmond, Virginia 23221
Telephone 353-2721

Annual Subscription—$4.00
Single Copies—50¢

GUEST EDITORIAL
The Problem of Hospital Acquired Infection—*John R. Kight, M.D.* 843

ORIGINAL ARTICLES
Androgenic Steroids in Anemia of Chronic Renal Failure—*Duane G. Wombolt, M.D.*, and *Norma S. Oller, M.D.* 846
Agenesis of the Gallbladder—*Alfredo Lopez-Rasi, M.D.*, and *Meade C. Edmunds, M.D.* 849
Femoral Neuropathy—*A. R. Coppola, M.D.* 854
Problem-Oriented Approach to Patient Care—*Stanley Berent, Ph.D.*, and *V. Joy McKeever, R.N.* 856

CANCER TRENDS
Uterine Cancer Control—A Project for All Physicians—*Ludovic J. DeVocht, M.D.*, and *Gail M. Hudson* 859

SURGICAL GRAND ROUNDS
The Causes, Prevention and Treatment of Post-Traumatic Pulmonary Insufficiency 863

CORRESPONDENCE
The Aggressive Optometrist 874

PUBLIC HEALTH
October—Immunization Action Month 875

MENTAL HEALTH
Involuntary Admission to State Mental Hospitals.. 876

THE MEDICAL SOCIETY OF VIRGINIA
Minutes of Council 882

WOMAN'S AUXILIARY 888

EDITORIAL
Modern Radiology of the Lung—*Christian V. Cimmino, M.D.* 890
Watergate Aftermaths—*Harry J. Warthen, M.D.*.. 892

NEWS 894

OBITUARY 896

The MONTHLY is not responsible for the opinions and statements of its contributors.
All advertisements are accepted subject to the approval of the Editorial Board.
$4.00 of membership dues is payable for one year's subscription to THE VIRGINIA MEDICAL MONTHLY.

Second Class Postage paid at Richmond, Virginia.

INDEX TO ADVERTISERS—916

THE GREATEST SINGLE THREAT TO YOUR FINANCIAL STABILITY IS

Disability

NOW YOU CAN INSURE AGAINST THAT THREAT

with Disability Income Program with New Maximum Benefits

Now for a very modest premium you can have up to $2,000 a month if you are disabled and unable to practice. Actually it's $2,200 with the 10% bonus now in effect. And it's all tax-free.

other features:

- Survivor's benefit at no increase in premium
- Coverage anywhere in the world, 24 hours a day, 365 days a year
- Special low-cost plan designed for the younger doctors
- Renewable to age 75 ■ Conversion privilege to age 65
- Few exclusions—even private flying is included
- Pays in addition to any other insurance you may carry

You can receive information immediately by writing or phoning (collect) the administrator. A minute of your time now will provide you and your family an income when it's needed most.

Program administered by:

David A. Dyer & Associates
Medical Arts Building
Roanoke, Virginia 24011
Call Collect: (703) 344-5000

FRED W. HALL
Northern Representative
8924 Orange Hunt Lane
Annandale, Virginia 22003
Call: 461-8087

FRED E. HAMLIN, JR.
Associate

DAVID A. DYER & ASSOCIATES has been awarded the seal of the American Institute of Professional Association Group Insurance Administrators. Membership in this group is by invitation only.

OTHER PLANS FOR YOUR PROTECTION

****Daily In-Hospital (up to $50)***
Major Hospital Nursing
$100,000 Excess Major Medical (Lifetime Renewable)*
****High Limit Accidental Death & Dismemberment ($250,000)**
Professional Overhead Expense
****Guarantee Issue Life Insurance***
Special Income Protection*
Preferred Physicians Disability Income

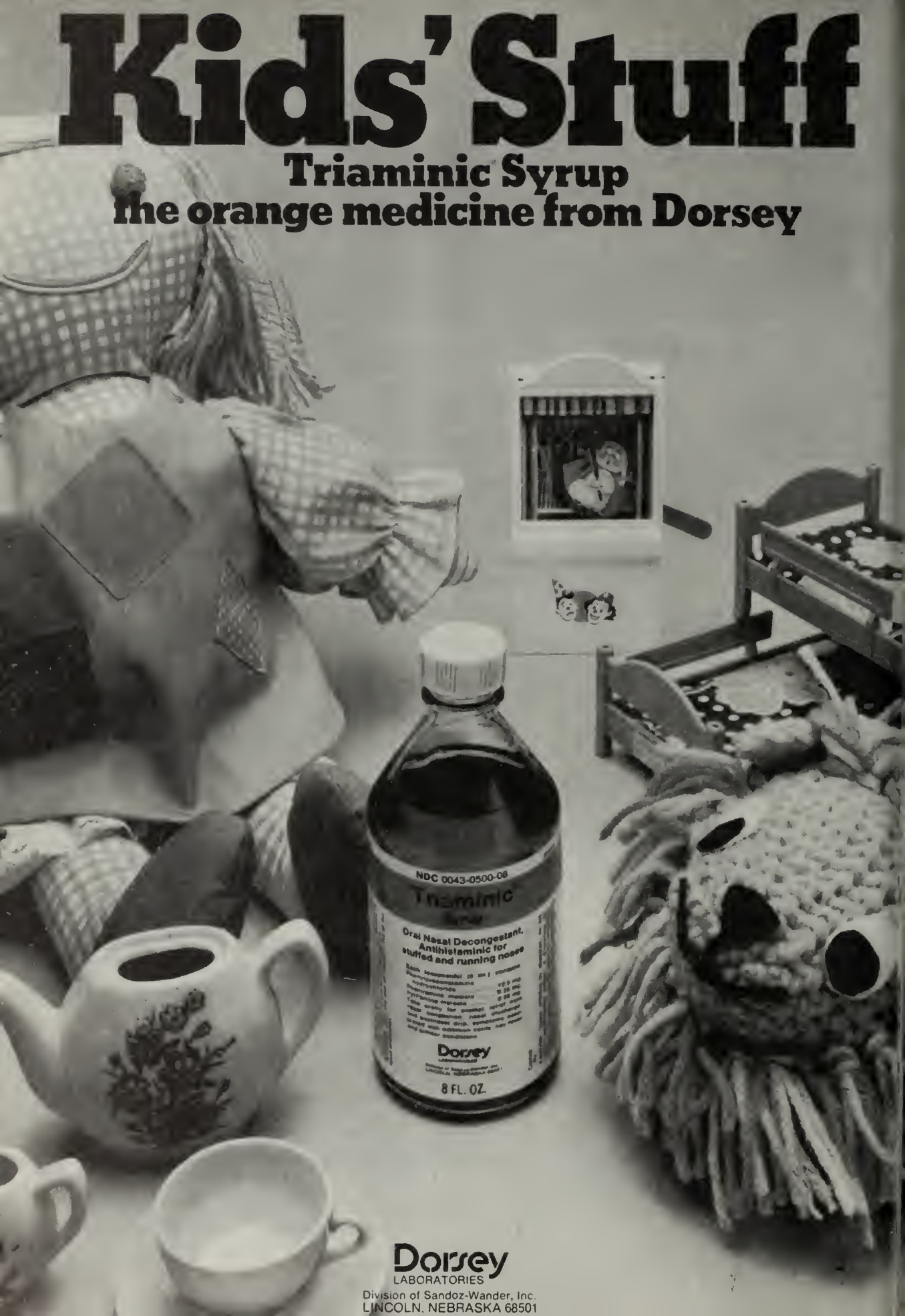
Non-Cancellable and Guaranteed Renewable Disability Income

*Guarantee Issue **Available to Employees

These plans are IDEAL for INDIVIDUALS, PARTNERSHIPS and CORPORATIONS

Kids' Stuff

Triaminic Syrup
The orange medicine from Dorsey



Dorsey
LABORATORIES
Division of Sandoz-Wander, Inc.
LINCOLN, NEBRASKA 68501

"Why is WANS® Children the pediatric antiemetic so often prescribed in Virginia?"

"Because WANS® Supprettes™ are formulated to rapidly and effectively deliver medication."

WANS® Supprettes™...

rapidly deliver effective levels of medication rectally

release medication through hydrophilic action—no oils or fatty acids to interfere with drug utilization or to cause local irritation

no refrigeration or lubrication other than water required

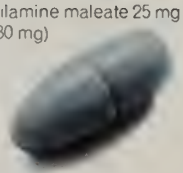
grooved for accurate half dosage

and no phenothiazines... no local anesthetics

DESCRIPTION: WANS® Children Supprettes™ contain pyrilamine maleate 25 mg and sodium pentobarbital ½ gr (30 mg) (*Warning:* may be habit forming) in rectal suppository form. *CONTRAINDICATIONS:* Infants under 6 months. Acute intermittent porphyria, known hypersensitivity to barbiturates or antihistamines, known previous barbiturate addiction, severe hepatic impairment, CNS injury and presence of uncontrolled pain. *WARNINGS:* Barbiturates may be habit forming. Pre-existing psychologic disturbances may be aggravated. Acquired sensitivity may result in allergic reactions. Safety in pregnancy has not been established. *PRECAUTIONS:* Use very cautiously with other sedative, hypnotic or narcotic agents. Use with caution in patients with acute hepatic disease, fever, hyperthyroidism, diabetes mellitus, severe anemia, and congestive heart failure. May impair alertness and coordination with increased accident risk. *ADVERSE REACTIONS.* Drowsiness, fatigue, vertigo, incoordination, tremor, muscle weakness, ataxia, hypotension, respiratory despression, delirium and coma. Dryness of nose, mouth, and throat, pupillary dilatation or blurred vision, urinary retention, abdominal pain, nausea, vomiting, diarrhea, and hypersensitivity reactions. Overdose or paradoxic reaction may cause excitation, insomnia, palpitation, tachycardia, convulsions and death. *DOSAGE:* Child 2-12 years: one WANS Children Supprette rectally every 6-8 hours. Infant 6 months-2 years: ½ dosage.

WANS® CHILDREN

antinauseant/antiemetic pyrilamine maleate 25 mg, sodium pentobarbital ½ gr (30 mg)



WEBCON PHARMACEUTICALS
Fort Worth, Texas 76101
Division of Alcon Laboratories, Inc.

Why is Gantanol® (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or pr vent sequelae (rheumatic fever, glomerulonephriti of such infections. Deaths from hypersensitivity rea tions, agranulocytosis, aplastic anemia and other bloc dyscrasias have been reported and early clinical signs (so throat, fever, pallor, purpura or jaundice) may indicate serio blood disorders. Frequent CBC and urinalysis with microscop examination are recommended during sulfonamide therapy. Insuf cient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal hepatic function, severe allergy, bronchial asthma; in glucose-phosphate dehydrogenase-deficient individuals in whom dos related hemolysis may occur. Maintain adequate fluid intake prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, apla tic anemia, thrombocytopenia, leukopenia, hemolytic anemia, pu

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy

Gantanol®

(sulfamethoxazole)

Tablets/Suspension
(0.5 Gm) (0.5 Gm/teasp.)

pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Since 1878

Service with Satisfaction

THE WILLIAMS PRINTING COMPANY

RICHMOND, VIRGINIA 23211

SAVE MONEY!

Take advantage of The Medical Society of Virginia-sponsored Master Retirement Plans

Mail coupon for information

MSV RETIREMENT PLANS

2425 Wilson Boulevard, Arlington, Va. 22201

Please send information regarding:

( ) Self-employed Retirement Plan

( ) Professional Corporation Retirement Plans

( ) Tax-deferred annuity plan for employees of private non-profit organizations

Name _____

Address _____

Phone _____

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritating symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

Cold or

Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory tract involvement such as the common cold, seasonal allergies, sinusitis, rhinitis, rhinitis and other upper respiratory tract conditions characterized by excessive nasal congestion and excessive upper respiratory secretions. Dimetapp Extentabs provide relief of congestion, stuffiness and nasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of the drying and thickening effect on the lower respiratory secretions, Dimetapp Extentabs are not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: Use in children with fever, severe asthma, or in those with glaucoma, stenosis, or urinary retention should be avoided. Dimetapp Extentabs may cause drowsiness. Caution should be exercised when operating a motor vehicle or other machinery.

PRECAUTIONS: Consult with a physician before administering to children under 12 years of age. Use with caution in patients with cardiovascular disease, hypertension, hyperthyroidism, diabetes, or those taking other medications containing sympathomimetic amines.

ADVERSE REACTIONS: Extended use of Dimetapp Extentabs could result in rebound congestion. Occasional reports of nervousness, dizziness, sleeplessness, nausea, vomiting, loss of appetite, irritability, tremor, palpitations, tachycardia, cardiac arrhythmia, and cardiac stimulation have been reported. Rare reports of urinary retention, difficult urination, and cystitis have been reported. Rare reports of hypersensitivity, including rash, urticaria, and cross-sensitivity to other sympathomimetic amines have been reported. Rare reports of blood dyscrasias have been reported. Rare reports of hypertension have been reported. Rare reports of hypertensive crisis have been reported. Rare reports of cerebrovascular accidents have been reported. Rare reports of myocardial infarction have been reported. Rare reports of cardiac arrest have been reported. Rare reports of sudden death have been reported. Rare reports of psychosis have been reported. Rare reports of seizures have been reported. Rare reports of coma have been reported. Rare reports of hepatitis have been reported. Rare reports of jaundice have been reported. Rare reports of liver failure have been reported. Rare reports of renal failure have been reported. Rare reports of anuria have been reported. Rare reports of oliguria have been reported. Rare reports of hematuria have been reported. Rare reports of proteinuria have been reported. Rare reports of nephrotic syndrome have been reported. Rare reports of acute tubular necrosis have been reported. Rare reports of renal papillary necrosis have been reported. Rare reports of renal cortical necrosis have been reported. Rare reports of renal vein thrombosis have been reported. Rare reports of renal artery thrombosis have been reported. Rare reports of renal infarction have been reported. Rare reports of renal cortical necrosis have been reported. Rare reports of renal papillary

when pain goes on... and on... and on–

For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.

Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides ¼ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen® with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

(III) Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

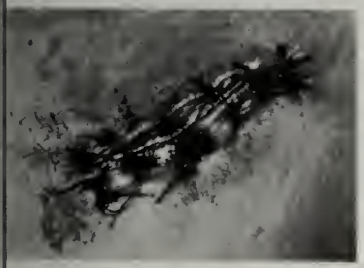
A. H. Robins Company, Richmond, Va. A·H·ROBINS

Healing nicely, but it still HURTS

HERE Burns

When parenteral analgesia is no longer required, Empirin Compound with Codeine usually provides the relief needed.

HERE Sutures



Empirin Compound with Codeine is effective for visceral as well as soft tissue pain—provides an antitussive bonus in addition to its prompt, predictable analgesia.

Ⓒ III **prescribing convenience:** up to 5 refills in 6 months, at your discretion (unless restricted by state law); by telephone order in many states.

Empirin Compound with Codeine **No. 3,** codeine phosphate* 32.4 mg. (gr. ½); **No. 4,** codeine phosphate* 64.8 mg. (gr. 1).*Warning—may be habit-forming. Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.

EMPIRIN® COMPOUND c̄ CODEINE

#3, codeine phosphate* (32.4 mg.) gr. ½
#4, codeine phosphate* (64.8 mg.) gr. 1

Wellcome | **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

Peoples...always ready to serve your patient...with all-night prescription center drug stores.

Southside Plaza/McGuire Circle at Belt Blvd. and Hall St., Richmond	BE 2-4566
Barracks Rd. Center/Emmett St. & Barracks Rd., Charlottesville	293-9151
Ward's Corner/Gramby St. & Little Creek Rd., Norfolk	588-5421
Boulevard and Broad Sts., Richmond	359-2497
Lee Highway & Old Dominion Dr.(Arlington)	522-0011
Park and Shop Shopping Center, US #1 by-pass at College Gate stoplight, Fredericksburg, Va.	(703)373-4607
Roanoke Tower Shopping Center Roanoke, Va.	(703)342-1877

. . . and 8 other stores in the Metropolitan Washington area.

In the small hours of the evening or morning—when your patient can't wait to have his prescription filled—call the Peoples pharmacist at one of the numbers listed here. He's ready to help when it's too early for anyone else to lend a hand.

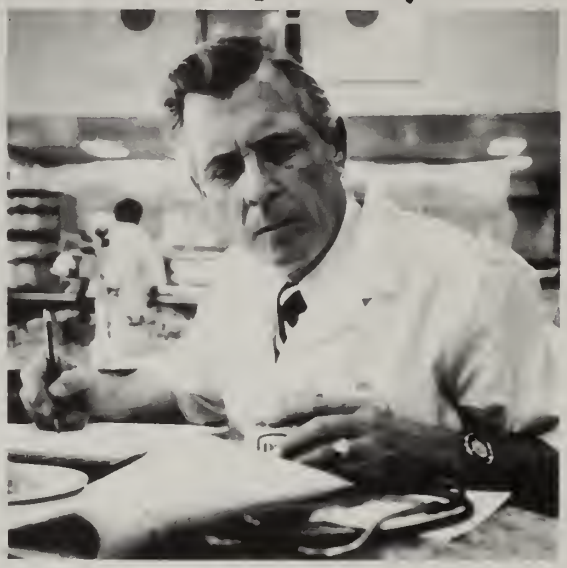
He's a good man to know. Any time.

Since 1905, Peoples has filled over 150 million prescriptions. *The next one we fill is just as important to us as all those in between.*

PEOPLES DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.

SURE, YOU COULD HANDLE $100,000 IN INVESTMENTS ON YOUR LUNCH HOUR.



You might even make money. Or you might not. Because if you're a busy man, you've probably got more immediate things to worry about.

And since you can't stay right on top of market trends, how your investments fare is more a matter of chance than deliberate choice.

There is an alternative. A VNB investment management account.

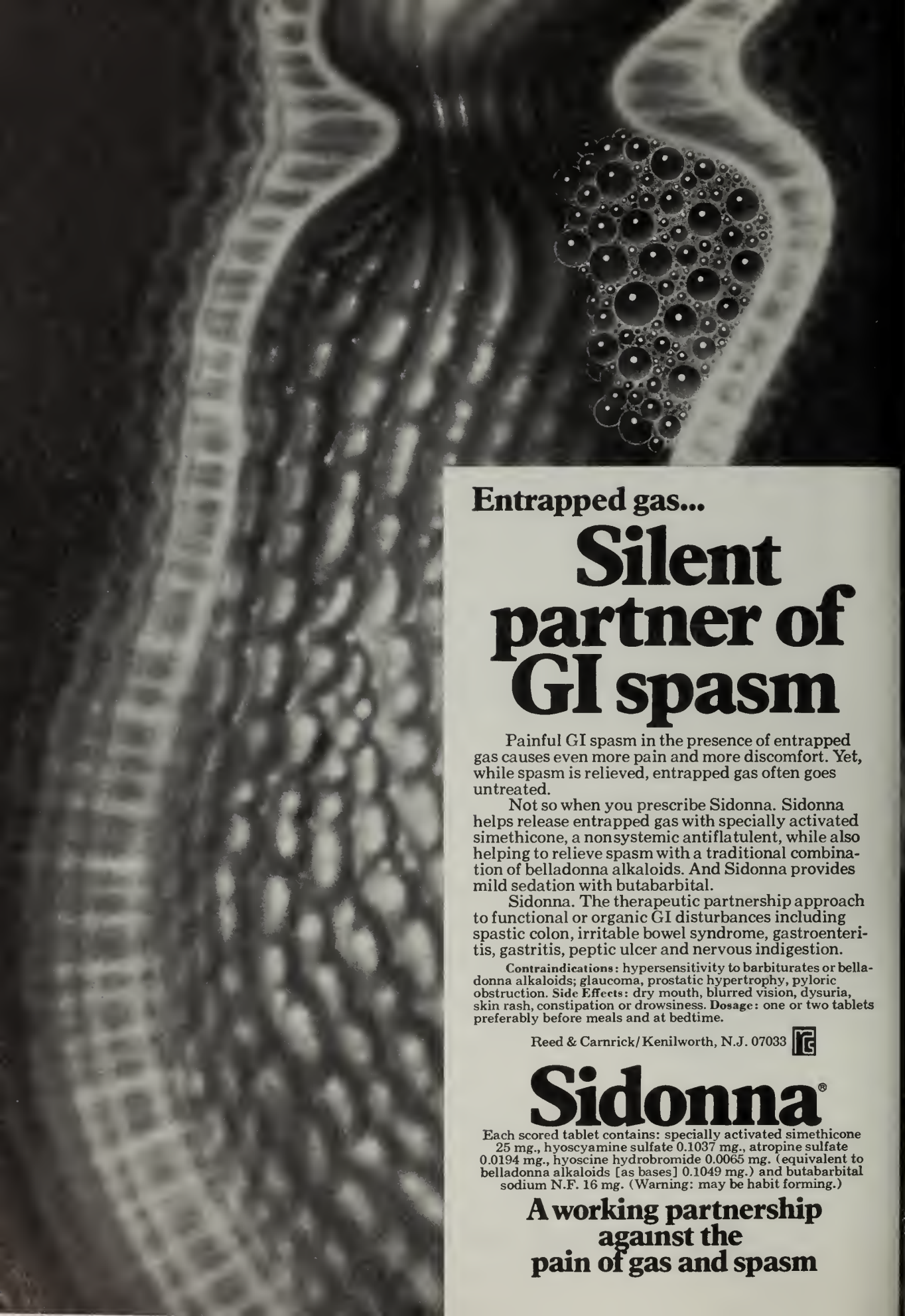
We can set up a plan for taking care of your holdings and extra income. You can dictate as much or little decision-making involvement as you wish. You can tell us what investment goals to pursue for your account.

In short, you can pretty well tailor this arrangement the way you like.

Then put your money with us, and we'll go on about your investments. While you can go on about your business.

VNB TRUST DEPARTMENT.

VIRGINIA NATIONAL BANK



Entrapped gas...

Silent partner of GI spasm

Painful GI spasm in the presence of entrapped gas causes even more pain and more discomfort. Yet, while spasm is relieved, entrapped gas often goes untreated.

Not so when you prescribe Sidonna. Sidonna helps release entrapped gas with specially activated simethicone, a nonsystemic antiflatulent, while also helping to relieve spasm with a traditional combination of belladonna alkaloids. And Sidonna provides mild sedation with butabarbital.

Sidonna. The therapeutic partnership approach to functional or organic GI disturbances including spastic colon, irritable bowel syndrome, gastroenteritis, gastritis, peptic ulcer and nervous indigestion.

Contraindications: hypersensitivity to barbiturates or belladonna alkaloids; glaucoma, prostatic hypertrophy, pyloric obstruction. **Side Effects:** dry mouth, blurred vision, dysuria, skin rash, constipation or drowsiness. **Dosage:** one or two tablets preferably before meals and at bedtime.

Reed & Carnrick/Kenilworth, N.J. 07033

Sidonna®

Each scored tablet contains: specially activated simethicone 25 mg., hyoscyamine sulfate 0.1037 mg., atropine sulfate 0.0194 mg., hyoscine hydrobromide 0.0065 mg. (equivalent to belladonna alkaloids [as bases] 0.1049 mg.) and butabarbital sodium N.F. 16 mg. (Warning: may be habit forming.)

A working partnership against the pain of gas and spasm

The Rx that says "Relax"

BUTISOL Sodium provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol C III SODIUM®
(SODIUM BUTABARBITAL)

Contraindications: Sensitivity or idiosyncracy to barbiturates; history of manifest or latent porphyria or marked liver impairment; respiratory disease with dyspnea or obstruction; history of addiction to sedative/hypnotic drugs; uncontrolled pain, to avoid because of possible excitement.
Precautions: Exercise caution in: moderate to severe hepatic disease; anticoagulant therapy, because of possible increased metabolism of coumarin anticoagulants; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects.
Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in those with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
Available as: Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL
cNeil Laboratories, Inc., Fort Washington, Pa. 19034

© McN 1971

Keflex®
cephalexin monohydrate

it makes sense

*Equivalent to cephalexin.

Additional information available to the profession on request.

Eli Lilly and Company • Indianapolis, Indiana 46206

Lilly

400123

The Virginia
MEDICAL MONTHLY

October, 1974
Vol. 101, No. 10
Whole No. 1469

Guest Editorial . . . .

The Problem of Hospital Acquired Infections

AT THE PRESENT TIME we designate those infections that develop during hospitalization as nosocomial infections. After having served as Chairman of the Infection Control Committee of a general hospital for several years it became increasingly apparent that physicians utilizing hospital facilities must be made more aware of the potential dangers associated with various procedures and instruments as a possible source of contamination. Although every physician is familiar with bacteriological principles of cross-infection, new ideas and circumstances frequently bring about new problems that must be anticipated and dealt with or the results may be extremely hazardous.

Ideas and circumstances oftentimes necessitate changes in policies or methods of management, sometimes adopting new or discarding the old. No clearer examples can be furnished than those of the leniency shown in allowing other than the obstetrical patient to occupy the post-partum area and the leniency in allowing fathers to frequent the labor room and to enter the delivery room. These changes were necessary due to increased demand for hospital beds and to conform with newer concepts in prenatal management. The results of these newer policies, which at first appeared to be with some risk, have proven to be beneficial and certainly no great harm has been done.

Throughout the entire modern hospital, changes are constantly taking place that present new problems in infection control. In the physical structure consideration must be given to the powerful air-conditioners and the rapidly moving large elevators. Either of these may disseminate air-borne organisms to distant and critical areas of the entire hospital unless safeguards are taken.

The present-day hospital population, with the daily census almost always exceeding the optimum, is a matter of great concern. It leaves less time for thorough housekeeping and increases traffic through the halls and into special units such as x-ray, physiotherapy, etc., where hazardous contacts may be made.

Further concern for the epidemiology of the hospital environment has been brought about by the expanded welfare programs. Medicaid and Medi-

care have increased the number of the very young and very old patients to be cared for. Each of these age groups is known to be exceedingly susceptible to hospital-type infections.

More often than not, the hospitalized patient today has some apparatus next to the bed or fastened to the bed for diagnostic or therapeutic purposes. Much of this equipment is bulky, expensive and therefore available in limited numbers. The almost constant use and the time required for adequate cleansing of such equipment necessitates constant surveillance and for proper maintenance requires specially trained personnel. It must always be borne in mind that by their improper use great harm can be done. Inhalation therapy machines, more importantly those with nebulizers, exemplify this type equipment. Far too often it has been proven that they have introduced infection into an individual.

Although equipment serving many patients must be used with extreme caution, single-use disposable and non-disposable equipment must necessarily share equally in attention. Most hospital-acquired infections occur in the urinary tract and the urinary catheter has been frequently and justly incriminated. Septicemia often follows the indiscriminate use of the intravenous catheter. In the recent past we are all aware of the tragic events following the use of a shipment of contaminated intravenous glucose solution. Quality control and meticulous management must be maintained to protect against the possibility of an infection spread within the hospital that could be of epidemic proportions.

What is our present concept for proper evaluation of hospital-acquired infections? No longer do we think in terms of a single inoculation by an organism as a cause of disease. Now in our epidemiological investigations, we reason in terms of "host, agent and environment". This is certainly not a new concept, but it is a new system for reasoning and for interpretation of infection.

The patient's age and general health represent inherent host factors. There may be factors present that compromise the patient, i.e. cardiac disease, diabetes mellitus, etc., over which we do not have absolute control but of which we must be aware to obtain beneficial results in providing resistance to infection. There are some equally significant host factors over which we have almost complete control. The most prominent among these and, by far the most frequently used and probably the most frequently misused, are the antimicrobial drugs. The proven success of these wonder agents needs no mention, but the potential adverse effects is not always considered when sound reasoning gives way to overenthusiasm. It cannot be emphasized too strongly that the antibiotics influence not only the individual's bacterial flora but may also lead directly to more virulent organisms existing in the hospital environ-

ment. When antibiotics are used, those organisms that will respond are destroyed and the resistant organisms prevail. If the individual could be made free of micro-organisms or the environment sterilized, reasoning in epidemiology could and would be along entirely different lines, but it has been shown repeatedly that when one strain of an organism is destroyed it is replaced by another. Studies have shown that in hospitals where there is large-scale use of prophylactic antibiotic therapy there is an increased incidence of significant infections. While instituting certain lifesaving measures we sometimes interfere with the patient's natural immunity. When radiation therapy, a chemotherapeutic agent, or use of a steroid hormone has appreciably depressed resistance, the hospital is obligated to offer the most pathogen-free environment possible, even if it requires reverse isolation.

In conclusion it may be emphasized that there are many factors in the modern hospital environment that are potential sources of nosocomial infections. To assume that the answers are known to the management of these problems would be entirely erroneous. Many of our accepted procedures and methods need further evaluation. The significance of changing bacterial flora in the hospital environment, virulence in organisms and species of organisms requires much study and all new equipment and drugs must be regarded as potential hazards.

The U.S. Public Health Service, through its Center for Disease Control in Atlanta, is participating in many educational programs and research projects to further our knowledge on these subjects. In Virginia the epidemiology section of the State Health Department likewise is undertaking educational programs and also doing statistical evaluation that will further aid in combating hospital-acquired infections. Practicing hospital physicians, nursing staffs and hospital administrative officers must enthusiastically participate in infection control programs in an effort to maintain constant surveillance of the hospital environment.

John R. Kight, M.D.

508 De Paul Medical Building
Kingsley Lane
Norfolk, Virginia 23505

Androgenic Steroids in Anemia of Chronic Renal Failure

DUANE G. WOMBOLT, M.D.
NORMA S. OLLER, M.D.
Norfolk, Virginia

The anemia of chronic renal failure, one of the complications of chronic hemodialysis, has been treated with testosterone with significant improvement in the hematocrit and in the feeling of general well being.

ONE OF THE CONTINUING MAJOR PROBLEMS in the management of patients with chronic renal failure is the severe anemia this is seen in patients on chronic hemodialysis programs. While many patients can function adequately at hematocrit levels of 20%, there is no doubt that their level of physical activity can be increased with higher hematocrit levels and they would have a greater reserve to fall back on in case of acute blood loss. One of the major treatment modalities has obviously been blood replacement, when levels are reached which necessitate an increase in blood volume. The two major hazards accompanying the use of blood replacement are the possible transmission of hepatitis and the development of antibodies which make finding a kidney suitable for transplantation more difficult.

The data presented in this report is on the use of androgenic steroids to simulate an increase in erythropoietin and subsequent red blood cell production and a rise in hematocrit. Since our institution is in the resort area of Virginia Beach, we have received many patients for transient dialysis. A large majority of them have not been on androgenic steroid therapy for the treatment of their chronic anemia and most have hematocrits in the 12-20% range. We have used androgenic steroids in the therapy of chronic anemia for the past two years and the accumulated data forms the basis of this report.

At the initiation of the study, 16 patients on chronic maintenance hemodialysis were randomly allocated to untreated or treated group. Control hematocrits in both groups were the same. Even though serum iron levels in most patients tested were within the lower range of normal, we anticipated that because of chronic blood loss in the dialyzer and frequent blood letting for laboratory tests that most patients had some degree of iron deficiency. Therefore, they were all started on oral iron supplements. The treated group was then started on testosterone cypionate, 400 mg. per week for males and 200 mg. per week for females. Both groups were followed for the next three months. At the end of that time, hematocrit in the control group was not significantly changed. There was a rise in the hematocrit of the treated group to levels statistically significant at the 0.05 level. At this point, the untreated group was also started on testosterone cypionate at the same dosage levels. Three months later, the hematocrits of the originally untreated group had risen to levels significantly different from the control values and the difference between the two groups was not significant at the end of six months. Hematocrits of the originally treated group had also continued to rise.

With the accumulation of this data in our own institution and other recent results reported in literature, all subsequent patients have been started on testosterone. We have continued to give male patients 400 mg. per

Presented at the Annual Meeting of The Medical Society of Virginia, Norfolk, October 18-21, 1973.

week and female patients 200 mg. per week. In all, 52 patients have been started and maintained on testosterone therapy for at least six months, some for 24 months. By the end of three months of therapy, the hematocrits significantly improved over control values and these results were still apparent at the end of one year. Hematocrit levels in some patients have increased to as much as 48%.

We have arbitrarily decreased the frequency of testosterone administration to all patients whose hematocrits exceed 35%. No routine blood transfusions have been given in the past two years. Seven patients have developed marked upper G.I. bleeding, characterized by fall in hematocrit, stools and gastric aspirate positive for occult blood. Two had duodenal ulcers demonstrated on upper G.I. series. The others showed non-specific gastric irritability. The average fall in hematocrit was 9%. Two patients required transfusions with packed cells. All were treated with increased antacid and milk therapy for 3-4 weeks at which time hematocrits began to rise and stools for occult blood were negative.

Other results of androgen therapy were an increase in serum creatinine and body weight after courses of testosterone therapy. This seems to be an increase in total body mass or dry weight rather than any accumulation of excess fluid. There also seems to be an increase in the sense of well-being of patients treated with androgenic steroids. Out patients have been dialyzed in one of two units, either in hospital or at a satellite unit. The satellite unit contains water that is treated with reverse osmosis. There is no essential difference between the patients in the two centers. This does not support the data from one center that reported dialysis with treated water seemingly corrected the anemia of chronic renal failure. The need for iron therapy in some patients is exemplified by one patient who supposedly took oral iron but remained anemic. After six months of treatment with testosterone, his hematocrit remained stable at 18%. Imferon

EFFECTIVE ANDROGEN THERAPY
ON
ANEMIA OF CHRONIC RENAL FAILURE

Fig. 1

HEMATOCRITS

	N	Control Hct.	1	2	3	6
Untreated	8	20.5	22.6	21.1	21.1	27.2
Treated	8	20.8	23.7	25.1	27.6	29.1

Fig. 2

HEMATOCRITS

N	Control	1	2	3	12
52	20.2	22.1	23.7	31.2 $p < 0.05$	28.4 $p < 0.15$

Fig. 3

	Patients	Average Months Treated	Dose of Testosterone Cypionate	Creatinine		Weight	
				Before	After	Before	After
N	52	10.4	300 mg/week	14.6	17.3	144.7	149.8
Male	27	8.3	400 mg/week	17.0	19.1	157.5	160.5
Female	25	12.0	200 mg/week	12.9	14.0	131	138

was then started and infused into the venous limb of the dialyzer at each dialysis. A marked rise in hematocrit occurred and by the end of two months, his hematocrit increased to 30%.

Side effects have been minimal. Six patients have developed moderate to marked acneform eruptions. These tend to clear with temporary suspension of testosterone administration, then re-starting at a decreased dosage schedule. One female complained of facial hirsutism and voice deepening. Androgen therapy was decreased.

All patients have had liver function studies at two month intervals. These consist of measurement of serum bilirubin, enzymes, SGOT and LDH and Australian antigen negative. No changes in liver function studies of other patients have been noted.

In summary, we feel that patients on chronic dialysis programs whose hematocrits do not rise about 20%, should receive supplemental androgenic steroid therapy.

Norfolk General Hospital
Norfolk, Virginia

Neurologic Problems of Infancy and Childhood.

A postgraduate course on this subject will be presented by Pediatric (Child) Neurology of the University of Virginia School of Medicine, the Medical College of Virginia and Eastern Virginia Medical School on December 6-8. The course will be held at the Cascades Meeting Center, Williamsburg.

The program on the 6th is on Problems of Cerebral Cortical Dysfunction and the subjects to be discussed are Cortical Development: the Biotransformation of Infant to Adult by Dr. Edwin C. Myer; Office Management of Learning Problems by Dr. Ronald B. David; Problems of Auditory Language Processing by Dr. Martin Lenhardt. All speakers are from the Medical College of Virginia. On the 7th the program will be on The Differential Diagnosis of Emotionally Induced Schooi Learning Problems by Dr. James G. Kavanaugh, Jr., University of Virginia; and Childhood Behaviors—Behavior Modification for the Physician by Dr. Eugenia Gullick, Medical College of Virginia; Comprehensive Management of the Epileptic Patient by Dr. Miriam Carmichael, State Department of Health; and Nutrition and the Developing Nervous System by Dr. Guy McKhann, Johns Hopkins Hospital, Baltimore. On Saturday, the subject will be Pediatric Neurology Potpourri and the speakers will be Dr. William Logan, University of Virginia, on Headaches in Childhood; Dr. James Etheridge, Eastern Virginia Medical School, on Breathholding Spells; and Dr. Fritz E. Dreifuss, University of Virginia, on Management of the Focal Epilepsies. Seminar groups will be held following all presentations.

Enrollment is limited to eighty persons. Thirteen and three-fourths prescribed hours by the American Academy of Family Physicians have been applied for.

Agenesis of the Gallbladder

ALFREDO LOPEZ-RASI, M.D.
MEADE C. EDMUNDS, M.D.
Clifton Forge, Virginia

Two cases of agenesis of the gallbladder are presented. The importance of careful dissection of hepatic pediculum and operative cholangiogram is stressed to rule out aberrant locations of the organ. Recent English literature is reviewed for the discussion of surgical approach.

AGENESIS OF THE GALLBLADDER and the cystic duct is a rare anomaly. It is found in 0.3% to 0.6% of either surgical or necroptic protocols. Bower[1] considered this to be the fourth most unusual anomaly of the hepato-biliary system. Aristotle knew that occasionally absence of the gallbladder was found in man.[2] Together with his findings, Aristotle lists several animals which routinely lack the presence of this organ. It is very interesting to note that many of these animals lack also a sphincter of Oddi.[3] This could be a physiological liability in human beings with absence of the gallbladder. The mere presence of the sphincter with its dysfunction could produce bile stasis, since this is known in cases of agenesis of the gallbladder. It is noteworthy that animals which are primarily herbivores do not possess a gallbladder, while carnivores uniformly have the organ.[4]

The first case of congenital absence of the gallbladder which was reported is that of Lemely[5] in 1701, although in the same year Bergman[6] reported another case in the world literature. Since then 164 cases have been reported, but still the problem cannot be diagnosed preoperatively because there is no way, at the present time, to differentiate between a non-functioning gallbladder and the absence of the gallbladder.[7,8] The surgeon is, therefore, confronted with this anomaly at the operating table. It is this problem, plus its rarity, which prompts the reporting of two consecutive cases and review of recent literature.

Case Reports

Case #1. RWB is a 41 year old married white female who has complained for four to five years of vague abdominal discomfort, accompanied by colicky pain usually after eating greasy foods. There is no history of acolia or coluria or jaundice. Her previous admis-

Fig. 1. Case No. 1. Operative cholangiogram.

sions to the Emmett Memorial Hospital are related mostly to vaginal surgical interventions, diagnosed as endometriosis of the vaginal wall. An exploratory laparotomy was done in the pelvic area and a bilateral oophorectomy and incidental appendectomy were performed. During her last previous admission a careful work-up of her complaints led to repeated oral cholecystograms and intravenous cholangiograms which never showed the opacification of the gallbladder. The conclusion was that the patient had cholecystitis, cholelithiasis with cystic duct obstruction, and surgery was suggested. An upper abdominal laparotomy was then done which revealed numerous adhesions in the pelvic area due to the interventions and pathology of her past history. The gallbladder area was found free of adhesions or signs of local inflammation; the cholecyst was absent. A delicate dissection of the common bile duct was performed, which was unrewarding, from the hepatic radicles to the supraduodenal area. A puncture cholangiogram was decided upon to rule out intrahepatic or retroperitoneal gallbladder, as shown in the photograph, and was interpreted as normal. A hard 1 cm. square nodule was found on the edge of the right lobe of the liver. This was wedged out and the report returned hemangioma. The operation was terminated, closing the peritoneal cavity in layers. The patient made an uneventful recovery. The patient now is in her second year following her surgery and on her periodic visits to the Clinic is feeling well.

Case #2. EHN is a 64 year old white female who was admitted to the Medical Service of Emmett Memorial Hospital for study of her epigastric pain. This is described as being located in the left subcostal margin, radiating to the left infrascapular area. Her pain is more related to exertion and gets better after resting. She can eat anything without discomfort, sometimes feels cardiac irregularities. Her past history reveals that she had her tonsils and adenoids removed as well as an appendectomy and hysterectomy. Her physical examination is unremarkable other than some tenderness over the left costal margin and epigastrium and a low midline laparotomy scar. The epigastric pain was investigated with electrocardiogram and Master's Step Test within normal limits. Several oral cholecystograms and intravenous cholangiograms were performed and the diagnosis was cystic duct obstruction without stones in the common bile duct. Surgery was proposed, accepted, and the exploration failed to show the gallbladder. No signs of acute or chronic inflammation were found, the dissection of the biliary ducts from the radicles to the duodenum was negative, and an operative cholangiogram was carried out and interpreted as normal. The abdomen was closed subsequently and she made a complete recovery. The patient has been followed for almost a year and no more epigastric discomfort has been present.

Discussion

Preliminary considerations are in order: Embryologically the primordial outgrowth of cells destined to form the secretory tube of the liver together with the duct system and the gallbladder is known as the hepatic diverticulum. It arises ventrally from the intradermal lining of the gut during the fourth week of intrauterine life. Distal to this point, it is a local dilatation of the original outgrowth which is the primordium of the gallbladder.[9]

The reasons why the gallbladder could be absent are explained in two ways.[10] First, the gallbladder and cystic ducts arise as an outpocketing of the hepatic diverticulum. A failure to accomplish this development causes complete agenesis of the gallbladder and cystic duct. Secondly, in the so-called solid phase of the hollow structures development in the embryonic life, these organs are obliterated, and failure of the gallbladder bud to resolve from its solid embryologic state might explain the atresia of the organs.

Autopsy series have reported an incidence of 0.035% to 0.3% of the gallbladder and common duct agenesis.[11,12] The incidence of this anomaly has been reported as high as 10%.[13] The average age range in which this anomaly

is found is 46 to 51 years of age. There appears to be an equal sex incidence in necropsy material, but the females have been reported two to one in some series.[13] In our first case the patient is a female 41 years of age and in the second case, the patient again is a female 64 years of age.

In a review done in recent years, Frey et al[14] report 142 cases, either surgical or necropsy reports, adding three of their own, and divided this report into proven, probable, possible, and questionable cases based on the guidelines of intraoperative cholangiograms and careful dissection of the biliary tree.

Since the review of the aforementioned, 19 new cases have been reported in the English literature.

If we follow the criteria of careful dissection and intraoperative cholangiogram as mandatory to accurate diagnosis, this last 19 cases collected will fall as eight proven cases[7,15,16,17,18,19,20,21], nine probable cases[16,22,23,24,25,26], one possible case,[8] and another as questionable.[27] The above classification is done after review of the operative report of each case.

The authors believe that the cases presented in this paper belong to proven cases because the two parameters of criteria were followed very carefully. However, there exists the possibility of a cystic duct obstruction in an intrahepatic gallbladder which some authors[4,14,26] have suggested but which has not been reported by anyone as yet. Kobacker[28] has mentioned the possibility of a familial tendency in this anomaly, and the absence of the gallbladder in twins. This has raised the possibility of a preoperative diagnosis of gallbladder agenesis. No one has reported making this diagnosis; moreover, every author's research stressed the idea of the impossibility of such a diagnosis with today's laboratory and radiological tools.

Symptoms associated are similar to and are as varied as those of the cholecystic disease. Acute pain simulating acute cholecystitis, or perforated peptic ulcer, has been reported.[29] Others have reported symptoms common to chronic cholecystitis, as epigastric pain, nausea, vomiting, fat intolerance, and bloating.[11,28,29,30] It is very interesting to note that in our second case this patient came in because of pain in the epigastric area on exertion, and after careful chest and heart evaluation, laboratory and x-ray work-up, the gallbladder was thought to be her problem. Chills, fever, and icteric bouts suggesting stone obstruction with or without cholangitis may be present.[29,31]

Similarity of symptoms associated with agenesis have raised speculation as to the location of the actual site of the disease. The presence of stones in the common bile duct in cases of agenesis of the gallbladder has proved that the gallbladder is not necessary to form stones, and the idea of retained stones may be untrue because the stones may have been formed in the common bile duct after surgery.[32,33] It is believed that the symptoms of cholecystitis could be caused by common bile duct disease or simple dyskinesia;[29,30] but the so-called biliary dyskinesia is still wanting for adequate explanation.

Physiologically the gallbladder has several actions: first, it is the reservoir of bile; second, concentration of bile to 10-fold its initial concentration; third, secretion of mucus and other substances; fourth, preservation of pressure within the bile tree; and fifth, responsiveness to hormonal stimulations, namely cholecystokinin liberated when acid, food, and fats are in contact with the duodenal mucosa, causing contraction, then dilating the sphincter of Oddi by reflex mechanism.[34] This last action of the gallbladder could explain the symptoms in absence of it due to the lack of relaxation of the sphincter of Oddi when cholecystokinin acts on the gallbladder. This could explain also the bile stasis and with this cholangitis or formation of the stones in these cases.

The diagnosis, as stated before, is impossible prior to surgery, because the report would invariably be non-functioning gallbladder. This failure could be interpreted as (a) diseased gallbladder, (b) cystic duct occlusion, (3) liver damage, (d) failure of absorption of contrast media from the gastro-intestinal tract, and (e) absence of the gallbladder.[35] Since the

greatest majority of causes belong to the first two possibilities, surgery is indicated because the anomaly of study is so rare.

The need of operative dissection is clear because of the many aberrant locations of organs. An apparent absence of the gallbladder could be (a) atrophic or covered with adhesions due to repeated attacks of cholecystitis[30], (b) in the abdominal wall[29], (c) in the falciform ligament[36], (d) in the left side under the left lobe of the liver[37,38], (e) lying transversely[39], (f) retroperitoneal[29], (g) intrahepatic[10], or (h) absence[10], of course.

Operative cholangiogram, although not infallible, is excellent to localize intrahepatic or otherwise aberrant positions.[29] Developed by Mirizzi[40], this was used for the first time by Malstrom[11] for the diagnosis of the anomaly. Others, as Dixon et al[30] and Latimer et al[41] have used post-operative T-tube cholangiogram for that purpose. Needle aspiration has been condemned[11,41] because of the possibility of bile fistulae if extrahepatic obstruction could exist.[42] It is evident that complete dissection at the necropsy table is the last word in the diagnoss of this anomaly.

Another consideration seems worthy of mention at this time, and this is the intra-operative radiomanometric study of the biliary tree, not as a diagnosis of agenesis or atresia but as a complement of the ill-defined pathology that accompanies this anomaly. This method, widely used in Europe for many years, has been developed by Caroli[43] and used by Mallet-Guy[44] and Hess[45] routinely, and consists in the measurements of the biliary tree pressure combined with the opacification of the hepatocholedocus with radiopaque substances. It is not a static manometric study; it is the dynamic pressure exerted by the dye similar to the bile and it is a complement of the x-ray films. Perhaps the more frequent use of this method will bring some future light to the perplexities that any physician experiences with the so-called biliary dyskinesia.

The treatment of this anomaly is very different as recorded in the different papers. In the reports studied and reviewed there exists little disagreement concerning the treatment of those patients with obvious indication for exploration of the common duct, such as dilatation of the ducts, jaundice, or palpable stones. There is no agreement, however, on how to handle the apparently normal common duct. Some authors[15,35] state that the common bile duct should be explored and drained in all cases, even with an apparently normal biliary tree. Dixon[30] recommends routine exploration and so does Pines et al.[31] There are those who do not explore unless the duct appears abnormal.[3,16,17,20,21,22,24,25,41,46] Choledochoduodenostomy has been reported[39,47] and a sphincterotomy has been done with good results.[4,31,48]

We chose not to open the bile duct because of its normality and the incident morbidity associated with choledochostomy. Adequate operative cholangiogram by direct needle injection was obtained in both instances.

Our recommendations are obvious in an abnormal common bile duct: exploration, treating of the abnormalities, stones or stricture and insertion of a T-tube. In the normal common bile duct, we feel a do-nothing approach is worthy of use. Perhaps a complete exploration of functional problems in the patient is necessary after the operation to find an explanation for his or her symptoms. We recognize the difficulties that arise in explaining our negative findings to patients and correlate with his or her symptomatology. One should emphasize that there is no way to rule out this anomaly before surgery, using the diagnostic facilities whch one has at the present time.

Summary

1. Presentation of two consecutive proven cases of absence of the gallbladder and cystic duct are discussed.
2. Physiology and embryology of the biliary tree are presented in order to explain the absence of the gallbladder.
3. English literature has been reviewed with

19 new cases since 1966, giving a total of 164 cases; 70 of them are proven cases of absence of the gallbladder.

4. Procedures to confirm diagnosis and treatment have been discussed, emphasizing the need of careful anatomical dissection, and use of the operative cholangiogram to affirm its diagnosis.

NOTE: List of References may be obtained from Authors.

Emmett Memorial Hospital
Clifton Forge, Virginia 24422

Speed-Up Urged In Approving New Drugs

A speed-up in the procedure whereby new drugs are approved for use in the United States is urged in an editorial in the August 5 issue of the *Journal of the American Medical Association.*

Edward D. Fries, M.D., pointed out that several drugs now widely used in Britain to treat high blood pressure are not yet available to doctors in this country. Dr. Fries is senior medical investigator for the Veterans Administration Hospital in Washington, D. C.

New pharmaceutical products in the U.S. must be licensed by the U.S. Food and Drug Administration, which requires scientific proof of safety and effectiveness.

The editorial is companion to a report in the same issue of the Journal by a British physician on how British doctors treat high blood pressure. There are many points of similarity, but British doctors have available several drugs that have proved useful, but still are awaiting FDA approval in the United States.

Drugs in question are debrisoquine, bethanidine and propranolol. The first two are not available in the U.S. Propranolol is available, but is not approved for use in high blood pressure. Debrisoquine has been disapproved. Reasons given for the delay have included, primarily, lack of sufficient evidence that the drugs are effective. Applications for approval were submitted to FDA years ago.

"Of course, the public must be protected against toxicity, as far as this is possible. We also must be certain that the effectiveness of a new drug has been adequately demonstrated. Once this information has been obtained, however, a decision to approve or disapprove the new drug should be carried out as expeditiously as possible.

"If the FDA reviewing officers are unable to do this then they should be circumvented by another mechanism. One suggestion is to utilize review committees of outside consultants," Dr. Fries says.

"At a time when the drug treatment of hypertension (high blood pressure) has assumed great importance, our colleagues from Britain are telling us that we are falling behind. If the British physicians have access to these drugs, then American physicians should have them also."

Dr. Fries placed the blame for the delays on the individual reviewing officers, declaring that "Such negativity does not seem to exist in all sections of the FDA. Especially, it is not seen at the administrative level."

Femoral Neuropathy

A. R. COPPOLA, M.D.
Newport News, Virginia

A case of femoral neuropathy of unusual etiology is presented. Partial relief was obtained after operation.

FEMORAL NERVE INJURY is relatively rare and there are few reported cases. Cases reported in the literature are usually secondary to penetrating wounds of the groin at the level of the inguinal ligament due to bullet or knife wounds. Many patients fail to survive such wounds because of exsanguinating hemorrhage as a result of simultaneous involvement of the femoral artery at the time of injury. Of interest also are those cases of femoral nerve injury with pelvic involvement of the nerve as a complication of abdominal surgery.[1,2] Femoral neuropathy has been described in association with abdominal aneurysms,[3] and there are, of course, many other disorders, other than trauma, which may prove conducive to the development of femoral neuropathy.[4] Femoral neuropathy secondary to hemorrage and thrombosis in a congenital hemangioma, as in the present instance, has not been previously reported in the literature.

A 61 year old physician's wife was admitted to the hospital on April 6, 1968, with the initial complaint of back pain. The patient had a history of recurrent back pain over a period of several years but at the time of admission she complained of severe low back pain, pain in the left lower abdominal region, and pain in the left thigh which had increased in magnitude and had become rather excruciating in the 24 hour period prior to admission. Past history revealed that she had a left renal calculus, urinary tract infections of mild nature in the past and had undergone menopause 13 years previously. Examination revealed a patient in acute distress complaining bitterly of back, left thigh, and calf discomfort unrelieved by large doses of demerol, morphine, and other narcotics. The left patellar and Achilles reflex were absent, there was weakness of both dorsiflexion and plantar flexion of the left foot and great toe (which was difficult to evaluate because of pain), and straight leg raising test was questionably positive on the left. No other significant neurologic findings were noted at the time of initial examination. Laboratory studies were all normal except for elevation of the sedimentation rate from 12 (4-7-68) to 22 (4-11-68). Roentgenograms of the chest and dorsal spine were not remarkable, showing only minimal hypertrophic lipping of the dorsal spine. Intravenous pyelography demonstrated a 1 cm. left renal calculus in the inferior calyx. Complete myelography on April 8, 1968, was entirely normal. Additional neurosurgical consultation was obtained and while there appeared agreement that the problem was that of femoral neuropathy the etiology remained obscure. After hospitalization of the patient for one week she called the attention of her attending physicians to the presence of a firm, tender, nonpulsatile mass just below the inguinal ligament on the side of her pain. Exmination revealed no thrill or bruit and surgical consultation was requested. Prior to operation the possibility of "matted" lymph nodes of metastatic nature was seriously entertained. At operation a large hemorrhagic mass involving and extending into the quadriceps muscle was found and excised in toto. Microscopic sections revealed this to consist of hemorrhage into a congenital hemangioma. The patient made a slow and uneventful recovery, but nonetheless requires occasional analgesics for discomfort several years later.

Summary

A case of femoral neuropathy resulting from hemorrhage and thrombosis in a congenital hemangioma with resultant compression of femoral nerve below the inguinal ligament is reported. Surgical removal of the causative lesion resulted in reasonable rehabilitation of the patient but persistence of residual discomfort remains unresolved.

Bibliography

1. Clare, F. B.: Femoral Nerve Repair. J. Neurosurg. 13: 195-198, 1956.
2. Chiasserini, A., Jr.: An Exceptional Case of Injury of the Femoral nerve. J. Neurosurg. 14: 228-229, 1957.
3. Razzuk, Maruf, A. et al.: Femoral Neuropathy Secondary to Ruptured Abdominal Aortic Aneurysms with False Aneurysms. JAMA 201: 11, 817-820, 1967.
4. Calverley, J. R. and Mulder, D. W.: Femoral Neuropathy. Neurology 10: 963-967, 1960.

338 Main Street
Newport News, Virginia 23601

Rough Contact Sports Okayed for Epileptics

Youngsters with properly controlled epilepsy should be permitted to play rough contact sports, including football, says the American Medical Association's Committee on Medical Aspects of Sports.

In a policy statement published in the August 12 issue of the *Journal of the AMA*, the committee points out that the previous admonition against contact sports for epileptics was based on theory rather than real scientific knowledge. The theory being that it was considered logical that anyone with seizures should not subject himself to repetitive head trauma.

In the policy statement the Committee, composed of physicians with special interest in sports medicine, reversed a 1968 position in which they had ruled against sports such as boxing, tackle football, ice hockey, diving, soccer, rugby and lacrosse for epileptics.

"This advice was based primarily on theoretical logic. There was, however, no statistical proof that repetitive physical contact, even of the head as in football, causes a greater frequency of seizures in the epileptic than might occur when the same patient was asleep. In fact, in many patients, seizures occur more often with sleep.

"Opinion is still divided, but there is ample evidence to show that patients will not be affected adversely by indulging in any sport, including football, provided the normal safeguards for sports participation are followed, including adequate head protection."

The Committee points out that each patient should be judged on an individual basis, and "all things being equal, it is probably better to encourage a young boy or girl to participate in a noncontact rather than contact sport. However, if a particular patient has a great desire to play a contact sport, and if to do so is considered a major ameliorating factor in the patient's adjustment to school, associates and the seizure disorder, then serious consideration should be given to allowing participation if the seizures are medically controlled."

The statement is presented by Richard W. Corbitt, M.D., of Parkersburg, West Va., Committee chairman, with the other members.

Problem-Oriented Approach to Patient Care

STANLEY BERENT, Ph.D.
V. JOY McKEEVER, R.N.
Charlottesville, Virginia

Identifying each patient with his unique set of problems rather than with a specific diagnosis leads to increased success of treatment especially in those situations where there has been neither close nor long continued contact between patient and physician.

ONCE CLASSIFIED, many patients in our mental hospitals may never receive the kind of treatment that would best modify their disturbances. Diagnosis often leads to stereotyped treatment, and this can be disastrous. Rossi (1972) points out, for example, that the assumption that senility is inevitable after age 60 so limits treatment possibilities for older patients that hospitalizations may actually increase the likelihood of their going further into behavioral disorder. The "geriatric" label often forestalls appropriate therapeutic handling of a patient's needs.

It is far from therapeutic to treat a patient as if the name of his disorder were his only identifying feature. Yet, such treatment is commonplace. Cardiac patients may sometimes be treated as though no other aspect of their lives but their "heart trouble" existed; cancer patients may be seen only as carcinomatous individuals, and it may be assumed that the psychotic person retains no healthy personality aspects. But, as Brown (1973) points out, schizophrenic patients are not always occupied in being schizophrenic, and it might be added that even when they are "being schizophrenic" the whole organism is not affected. The responses of staff to the labeled aspects of the patient often, unfortunately, preclude responsive attention to the "unaffected" parts. Since the residual health of a sick individual often represents his most important resource for recovery, such neglect is often tragic.

Staff development and continued education represent ways around this nosological pitfall. Other avenues of escape are found in the manner in which we initially approach the problem. Weed's (1971) "problem-oriented" system of record-keeping, for example, offers one way out of this dilemma. This system emphasizes the problems that must be dealt with in helping the patient rather than the nice precision of a diagnosis. "Schizoprhenia" as a category may include a huge variety of specific problems, some of which may very well be capable of solution. The problem-oriented approach permits one to solve those problems that can be solved, and to identify those that cannot. Such an approach encourages caring personnel to perceive each patient as an individual human being with specific problems, some of which are more resistant to treatment than others. It discourages the tendency to see nothing more in the schizophrenic patient than his schizophrenia, or to assume that one in the geriatric age bracket is inevitably senile. The use of the problem-oriented method is likely to amplify the range of treatment possibilities and provide the patient with much more help than he would otherwise get.

Problem-orientation can be applied to more than the keeping of medical records, and become a factor in a variety of staff-patient interactions. The case that follows illustrates a

From the Department of Psychiatry, University of Virginia Medical Center.

problem-solving approach to the assessment and treatment of a patient on a psychiatric inpatient unit. The handling of this case contrasts strikingly with the more global approach customary in much clinical practice. The patient in question might have been presented on the basis of the need to determine the likelihood of organic brain damage. Although it is often genuinely important to ascertain whether organic impairment exists, because of the need for appropriate medication in such cases for instance, the determination of organicity does not of itself establish all of the possible useful treatment goals.

Members of the problem-oriented team, working closely with one another, were able to define specific problems in the behavior of this patient and to identify specific treatment goals. Once these formulations were made, practical questions about the feasibility of the selected goals could be answered. In this situation we see a working application of scientific method in an assessment that carries over into and blends with treatment determinations.

The patient was a 49-year-old woman said to be suffering from chronic brain syndrome concomitant with tertiary syphilis. Her behavior had steadily deteriorated during her nine-year confinement in a large mental hospital. By the time she was referred to the problem-oriented team she had come to spend almost all of her waking hours sitting in the dayroom without conversation or noticeable movement. She had to be spoon-fed and led about by the hand. Since she had become significantly dependent on others for her mere existence, the staff was eager to apply such behavior modification techniques as would teach her a greater measure of independence and some ability to meet her own needs.

The Team drew up a set of questions relating to a proposed treatment plan which aimed specifically to teach the patient to feed herself. The Team factored the self-feeding maneuver and listed many of the specific actions it involves. For example, one has to be able to hold a utensil and move it from plate to mouth with some degree of coordination. A number of practical questions arose. Was this patient able to chew solid foods, or should she be taught to drink liquids? Could she sit at a table? Was her diet restricted? Was she able to walk to the cafeteria? Could she hear the therapist's instructions? What would reinforce such correct responses as she might make? In making the list of such questions the Team simplified wherever possible. They found that the availability of such a list did much for the morale of the staff inasmuch as it related with specificity to the needs of this patient and hence to the treatment goals.

The evaluation of the patient's performance came next. The Team sampled behaviors essential in some aspect of the total treatment situation. For example, one session involved placing a piece of candy in the patient's hand. She dropped it. It was put in her hand again, and she was told, "This is a piece of candy. You may eat it if you like." This time and with this encouragement she held it, slowly moved her head to look at it, and tried raising it to her mouth in a trembling hand. After a number of attempts she was able to coordinate her movements well enough to put the candy in her mouth.

Since this procedure was designed to sample behaviors involved in the act of eating, the assumption was then made that she could be taught to raise a spoon to her mouth as well as she had lifted the piece of candy. All of the questions on the list were explored in a similar manner, and information from the assessment was used by the Team to formulate a more specific, step-by-step treatment plan, which was carried out successfully. The patient did become able to feed herself.

The Team then gave its attention to new treatment goals, using serial assessment and treatment as before. Again, they enjoyed success. The patient became able to walk without help, and, eventually, to talk minimally with other patients.

The essential goal in this case was not the determination of organic damage; certain organic impairment was assumed. What was essential was the possibility that this woman

might learn to feed herself, and only appropriate treatment could answer this question. The need for any predictive assessment at all was based on two considerations, one economical and the other humanistic. Economically, some prediction of the success of a proposed treatment can save many hours when the patient is one of eighty in an understaffed ward. Humanistic ends are well served when advance information about a patient's learning capacity helps the therapists to formulate realistic goals and to avoid cruel and punishing frustration for the patient, while at the same time increasing the likelihood of success and a rewarding experience for all concerned.

It seems highly important to each member of the Team in this case that the kind of treatment a simple diagnosis of "organicity" might have denied her was administered to this patient and proved successful.

References

Brown, R.: Schizophrenia, Language and Reality. Am. Psychologist 28: 395-403, 1973.

Rossi, A. O.: Treating Old People Like Children Can Bring on Mental Breakdown. Modern Nursing Home 29: 1972.

Weed, L. L.: Medical Records, Medical Education and Patient Care: *The Problem-Oriented Record as a Basic Tool.* Cleveland: 1971, Press of Case Western Reserve University.

Department of Psychiatry
University of Virginia
Charlottesville, Virginia 22901

New Society Will Boost Voluntarism By Physicians

Boosting voluntary health care service by American physicians both at home and abroad is the objective of a new organization formed this summer, Association of American Volunteer Physicians (AAVP).

Nucleus of AAVP is a group of several hundred American doctors who served brief volunteer tours in Vietnam, treating civilians in hospitals. They were participants in the American Medical Association's Volunteer Physicians for Vietnam program.

The Vietnam veterans formed the new society at a meeting in June in Chicago in conjunction with the AMA annual convention.

Among the stated goals of AAVP will be to participate, upon request, in cooperative health programs throughout the world, working in concert with the National Council for International Health, and a primary objective will be to encourage voluntarism in medical programs at home and abroad.

AAVP will maintain liaison with various organizations utilizing physicians volunteers abroad and will assist in professional and technical services. Its members will contribute to continuing education programs abroad, and will be available for professional service in national and international disasters.

AAVP membership will be open to physicians who have served overseas with voluntary organizations and agencies, including those who participated in the AMA program in Vietnam.

Further information on the new organization is available through Dr. James F. Gerrits, M.D., secretary-treasurer, Post Office Box 107, Marysville, Mich. 48040.

Cancer Trends....

Uterine Cancer Control—A Project for All Physicians

LUDOVIC J. DeVOCHT, M.D.
GAIL M. HUDSON

In spite of the existence of a simple, early diagnostic technique for carcinoma of the cervix, this form of cancer continues to be a major health problem throughout the world. Even in the United States, after years of educational programs directed to the medical profession, and after intensive educational programs encouraging women to take advantage of the Pap test, it is estimated that there will be 46,000 new cases of invasive cancer of the uterus and 11,000 deaths this year. Virginia's share of these statistics includes an estimated 1,100 new cases and 250 deaths from uterine cancer. Most of these treatment failures will occur in patients who are diagnosed at advanced stage of the disease.

Progress has been made, however. Just 40 years ago, uterine cancer was the leading cancer killer of women in the United States. Since then, the death rate has dropped 65% and much of this improvement probably can be attributed to the development of the Pap test by the then young Greek-American pathologist, Dr. George N. Papanicolaou. With wider application of the Pap test on our asymptomatic population, the American Cancer Society is convinced that deaths from uterine cancer should be further reduced by detection at a very early stage. This is supported by the marked effect of stage of disease on treatment results (table I).

TABLE I

CANCER OF THE UTERINE CERVIX

International Clinical Classification		Approximate 5-year Survival rates*
Stage 0	Carcinoma in situ	95-100%
Stage I	Carcinoma strictly confined to cervix	70- 80%
Stage II	Carcinoma extends beyond the cervix but not to pelvic wall or lower third of vagina	40- 50%
Stage III	Carcinoma has extended on to the pelvic wall and/or involves lower third of vagina	20- 30%
Stage IV	Carcinoma has extended beyond true pelvis or has involved mucosa of the bladder or rectum	10%

*from Ullery, J.C.: Management of Gynecologic Cancer (American Cancer Society Publication), 1969.

The accuracy of the Pap test in detection of cervical cancer is well over 95%, even if the lesion is an occult "early" one. However, in corpus cancer, the Pap test is only 75-80% accurate in most laboratories. To get more accurate Pap tests of the corpus, some physicians are now using a relatively simple new washing device called the Gravlee Jet Washer. This technique washes out the corpus cells for examination without the traditional dilation and curettage and makes this valuable cytologic examination acceptable for those asymptomatic patients who are without obvious physical findings. Fortunately, cancer of the corpus (or endometrium) accounts for only about one-third of the cases of uterine cancer and it

DeVocht, Ludovic J., M.D., *Chairman, Uterine Cancer Task Force, American Cancer Society, Virginia Division, Inc.*

Hudson, Gail M., *Program Coordinator, American Cancer Society, Virginia Division, Inc.*

Sponsored by the Professional Education Committee, Virginia Division, American Cancer Society.

occurs mostly in postmenopausal women. Since Pap tests do miss some of these cases, it is particularly important for older women with unexplained bleeding or discharge to be carefully evaluated by a physician even if the Pap test is negative.

Although there was resistance on the part of some physicians to accept the Pap test when it was first introduced, today the medical world accepts it as a reliable and practical tool for the early detection of uterine cancer. Unfortunately the wider use of this life-saving test is hampered by women's attitudes and fears as well as by those physicians who neglect to take a Pap test smear unless the patient asks for it. A recent survey conducted by the Gallup Organization, Inc., for the American Cancer Society on "The Public's Awareness and Use of Cancer Detection Tests", indicated that a woman most often has her first Pap Smear Test due to a physician's influence rather than on her own initiative. Women who reported having had a Pap Smear Test were asked why "they first happened to have the Pap Test". Among these women, 29% said that it was part of a routine physical examination, 23% that the test was suggested by a doctor, and only 11% specifically mentioned personal safety as a reason.

If we have failed to fully exploit this valuable tool, it appears that the physician is often culpable.

The above survey also indicated that there have been definite gains since 1963 in women's awareness of the Pap Smear Test despite our disappointment regarding its non-uniform use. In the current survey, almost nine in ten women (87%) were aware of the Pap Smear Test as a means to detect cancer. This is a moderate increase since 1963 when 78% of all women were aware of the test. During this same period, moreover, there has been a substantial increase in the proportion of women who reported ever having had a Pap Smear Test, from 48% to 78% in the current survey. The proportion of women who reported having a Pap Smear Test within the past year has more than doubled since 1963, from 23% to 52%. It is also interesting to note that the same survey indicated that about two out of five women have a breast examination by a physician at least once a year on the average, and that their awareness of breast examination as a means to detect cancer has remained on the high level reported in 1963—(86% vs. 83%).

The Gallup Survey also showed an increased awareness of the importance of a periodic complete physical examination. Two-thirds of all adults surveyed (66%) said that they have "at some time gone to a doctor for a complete physical check-up even though they were feeling all right". This compares with the 57% who said this in 1963. Moreover, there has been a substantial increase in the proportion who reported having had a complete physical examination within the past year—40% in this year's survey as compared to 11% in 1963.

Women's attitudes toward the physical check-up, and especially the Pap test, are influenced considerably by their physicians, as these figures indicate. An English study found the willingness to have repeat tests rested on the circumstances in which the first test was administered, on whether the dignity of the woman was respected, on the undressing arrangements, and on the staff's general attitude toward the patient. Women often have a multitude of fears, such as fear that the Pap test would sterilize them, or that past promiscuous sexual behavior would be exposed. Male friends or spouses sometimes feared the Pap test would change sexual practices. And finally, there was the fear that the test might really detect cancer and that the disease might then be incurable. The physician can do much to dispel these inappropriate notions.

Concerned that thousands of women continue to die from uterine cancer each year, the American Cancer Society in 1972 activated a National Task Force on Uterine Cancer Control. This program was charged with spearheading a nationwide effort to reach and screen not only the middle income woman, but to deal with the fact only 22% of the women

in low-income groups have been reached by current detection programs on uterine cancer.

The goal of the Uterine Cancer Task Force is "a Pap test for every woman 20 years or older to whom the test is applicable, and for those under 20 at risk, by the year 1976." The American Cancer Society estimates that in Virginia there are 1,485,497 women age 20 and over. Although completely reliable statistics are not available, results from the recent Gallup Survey referred to earlier, indicate that approximately 22% of the more than 70 million women in the United States age 20 and over have still never had a Pap test. Using the national percentage, this would mean that in Virginia there are an estimated 326,809 women who have never had a Pap test. These women are the primary target of Virginia's Uterine Cancer Task Force effort, a program to further exploit the obvious advantages of this screening method.

In this previously unscreened group are mostly low-income women, menopausal women, and women living in isolated areas. Studies have shown that 90 black women to every 50 white women have cervical cancer. Among all women in this country, cervical cancer incidence is second only to breast cancer, but in these low-income groups it is actually more prevalent. The omission of the Pap test in these groups is not hard to understand. Nonwhite, low-income women are too often unable to pay private physicians and they may well lack means of transportation to clinics and hospitals where the test is available. They are frequently unable to take off from work to attend clinics unless they are critically ill or they may not be able to afford babysitting services. The terminology of the medical profession is not well understood and this often creates needless fears in this type of patient. Frequently education programs have been unrelated to the immediately available services in some areas and thus not relevant to this particular population group. Data also indicates a causal relationship between uterine cancer and early sexual activity. The term used in the Task Force goal, "under 20 at risk", refers to the younger woman who has begun to make sex a major activity in her life. There is a high correlation between all these various factors and low-income ghetto residents.

In the second target group for this Pap Test program are menopausal and postmenopausal women. Many of these older women matured during a time period when the Pap test was not a commonly accepted procedure and have not had a pelvic examination since their childbearing years. An estimated 3,500 women are presently dying annually of cancer of the endometrium, which is primarily a disease of the mature woman in her 50's or 60's. About 75% of all endometrial cancer is diagnosed after the menopause. In its Task Force program the American Cancer Society is making special efforts to reach these older women, particularly those who have one or more of the following characteristics frequently associated with endometrial cancer:

Over 40
Postmenopausal
Menstruating over 45
Hypertensive

The slogan for the Uterine Cancer Task Force effort is "Let No Woman be Overlooked" and special efforts are under way in Virginia and throughout the nation to intensify educational activities directed to these target groups of "difficult to reach" women. "Action-oriented" programs are being developed so that in addition to alerting women to the importance of the Pap test, the American Cancer Society can also make sure Pap testing facilities are available. This aspect of the project involves working cooperatively with local health departments, family planning groups, local physicians and other community agencies. Public education efforts alone are clearly insufficient.

During September, which was designated as Pap Test Month in Virginia, special news media cooperation was sought to help to inform women throughout the State about the Pap test and existing Pap test facilities. The

emphasis, first, is to encourage women to visit their own physicians or to go to available local clinics for a Pap test if this is available through these routes. In some communities, special Pap test clinics are being developed if this is the most practical way to achieve these goals.

As a result of these many efforts, volunteers will be calling on physicians around the State for assistance with the Uterine Cancer Task Force program. Physicians in a branch of medicine where a Pap test is not usually performed (such as EENT or psychiatry) can still help by being aware of the usefulness of the Pap test and, whenever possible, encouraging women patients to have one annually. Many physicians can assist directly by helping staff existing clinics or "ad hoc" Pap test clinics.

To help physicians remind women patients about the Pap test, the American Cancer Society, Virginia Division, has prepared a small Pap Test reminder card which was distributed recently with a letter to all Virginia physicians. The requests for this card have been overwhelming, clearly indicating the desire of physicians to assist in this effort to curtail the mortality rate from uterine cancer. The most important role a physician can take in this undertaking is to be convinced of the importance of the Pap test and to pass on this conviction, by urging, reminding, and encouraging all women patients, especially those in the two major target groups—low-income and menopausal age groups. Actually the Pap test is a key part of a regular health check-up but we must depend on the medical profession in Virginia to join us with vigor if we are to achieve the goals of the Uterine Cancer Task Force. We are counting on you!

Bibliography

1. Facts & Figures on Uterine Cancer Control, American Cancer Society, Inc. New York City, N.Y., 1973.
2. Read, Clifton R.: The Cancer Women Can Defeat. Family Health V: Number 3, March, 1973.
3. 1974 Cancer Facts & Figures, American Cancer Society, Inc., 1974.
4. Ullery, John C., M.D.: Management of Gynecologic Cancer. American Cancer Society, Inc., 1969.
5. Nelson, James H., Jr., M.D., and Hall, J. Edward, M.D.: Detection, Diagnostic Evaluation, and Treatment of Dysplasia and Early Carcinoma of the Cervix. Ca—A Cancer Journal for Clinicians 20:150-163, American Cancer Society, 1970.
6. Gusbert, S. B., M.D., D.Sc.: An Approach to the Control of Carcinoma of the Endometrium. American Cancer Society, Inc., 1973.

Clinical Center Study of Patients with Cystosarcoma Phylloides or Male Breast Cancer

The cooperation of physicians is requested in the referral of patients with cystosarcoma phylloides or male breast cancer for studies being conducted by the National Cancer Institute's Medical Breast Cancer Service at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients at all stages of disease would be potentially acceptable if they are ambulatory and under 65 years of age. The studies involve evaluations of chemotherapy, immunotherapy, and hormone therapy in patients with known disease, and of the value of tumor markers in patients with no evidence of disease.

Physicians interested in further details and in having their patients considered for admission may write or telephone: Douglass C. Tormey, M.D., Ph.D., Chief, Medical Breast Cancer Service, National Cancer Institute, Building 10, Room 6B-02, Bethesda, Maryland 20014, (Area Code 301) 496-1547.

Surgical Grand Rounds . . . .

From the University of Virginia Medical Center

Edited by
Gerald T. Golden, M.D.

The Causes, Prevention and Treatment of Post-Traumatic Pulmonary Insufficiency

GERALD T. GOLDEN, M.D.
STANTON P. NOLAN, M.D.

Dr. Gerald T. Golden: The syndrome of progressive pulmonary insufficiency developing after life-threatening multiple-system injuries has been reported with increasing frequency in recent years. A considerable quantity of clinical data has come from the Vietnam experience and from civilian institutions. Because of better methods of evacuation and more sophisticated care of the injured, the patient population includes many who would not have survived their initial injuries 20 years ago. Serious pulmonary complications after trauma have had many epithets, including "shock lung", "wet lung", and "adult respiratory distress syndrome"; however, the term "post-traumatic pulmonary insufficiency" is now most frequently used. ("Trauma" here does not necessarily imply accidental physical injury. Often this "trauma" is inflicted by the surgeon during an emergency operation.)

As it is currently described, there are two features of this syndrome: (1) resuscitation from a low flow state of shock, and (2) progressive deterioration of pulmonary function after apparently successful resuscitation. Often a single identifiable cause predominates. Accordingly, frank pulmonary edema due to fluid overload, massive fat embolism after fracture of an extremity, congestive heart failure in patients with myocardial disease, aspiration pneumonia and direct injury to the pulmonary parenchyma are not included. An acceptable definition of this syndrome would be: respiratory failure of ill-defined etiology which occurs in patients surviving life-threatening trauma, or respiratory failure due to shock + "X" where "X" is the unknown factor or combination thereof.

Although the definition of the syndrome has varied in the published literature, Dr. Francis Moore[1] has divided it into four phases. The first phase includes the initial injury, resuscitation from a state of low tissue perfusion and an early period of stabilization, during which a large volume of electrolyte solution, colloid or blood is administered. The patient often exhibits persistent hyperventilation with hypocarbia and alkalosis despite elevation of the serum lactate. Arterial oxygen content remains normal in this phase, although there may be a decrease in pulmonary compliance, as evidenced by sophisticated measurements or observation of the ventricles. In the second phase, lasting one to five days, hemodynamic stability continues, but systemic alkalosis persists and is of a mixed respiratory-metabolic origin caused by the additive effects of hyperventilation and by metabolism of the previously infused citrate solution, nasogastric suction and diuretic therapy. Pulmonary insufficiency becomes evident with the onset of tachypnea, hypoxemia and evidence of an increasing alveolar-arterial oxygen gradient. This hypoxemia is resistant to increasing tensions of in-

From the Department of Surgery, Division of Thoracic-Cardiovascular Surgery University of Virginia Medical Center, Charlottesville.

spired oxygen and is indicative of a significant intrapulmonary shunt.

In the third phase, there is progressive pulmonary insufficiency. Tracheal intubation with controlled ventilation is necessary for continued oxygenation. If controlled ventilation is not employed, hyperventilation with hypocarbia and respiratory alkalosis continues, and is accompanied by an increasing lactic-acidosis. There is frequently invasive sepsis from staphylococcal or gram-negative infections of the tracheobronchial tree, lungs and surgical wound.

The final phase, lasting only a few hours, is characterized by a rise in $PaCO_2$, an overwhelming ventilation-perfusion imbalance, and a fall in arterial pH, bradycardia and ultimately cardiac arrest which is refractory to resuscitation. Taking the overview of patients in our experience, there is the initial insult, followed in 48 to 72 hours by pulmonary insufficiency, which usually requires a period of controlled ventilation.

If the patient dies, the lungs are wet and edematous, without extensive atelectasis, at post-mortem examination. If death has occurred within 48 hours, they exhibit a "liver-like" consistency. If death occurs at five to seven days or later, they are grey in color, with edema, confluent areas of bronchopneumonia and a marked tracheobronchitis. Microscopic examination demonstrates capillary congestion with interstitial and intra-alveolar hemorrhage. In some cases, there is an intra-alveolar deposition of collagen or formation of a hyaline membrane.

The incidence of this lethal process is unknown, although Moore[1] reported that 31 per cent of all deaths in an active civilian intensive care unit were due to progressive pulmonary insufficiency. In our experience, pulmonary insufficiency predominates as a cause of death in patients with severe injury who survived for more than seven days after their injuries. What is unclear in most reports is the number of patients who sustain severe trauma with pulmonary complications, but recover because of appropriate, aggressive management. Our own experience with trauma victims treated in the intensive care unit would indicate that the "syndrome" is frequently irreversible.

In fairness, we must say that no precise definition of etiology is known. It is, however, of value to piece together those factors which are known to provide a basis for understanding, preventing and treating this disorder. Each potential etiologic mechanism is discussed apart from the others, although such subdivisions are arbitrary and do not do justice to the multifactorial nature of this syndrome or to the interaction of factors which occurs after complex multiple system injury.

Altered Surfactant Production. Surfactant is a complex of lipid and protein, 70 to 80 per cent of which is L-dipalmitoylphosphadyl choline. This substance lowers the surface tension of alveoli, preventing collapse, and also promotes alveolar and bronchial cleansing. It is synthesized by the type II alveolar cells which contain osmophilic, lamellated organelles and a surfact active lipoprotein. These cells are metabolically quite active and sensitive to hypoxia. Normal surfactant production is known to require normal pulmonary blood flow and ventilation.

Production of this substance is reduced in experimental animals by hemorrhagic shock, severe trauma, burns, starvation and nonthoracic sepsis. Recently, diminished incorporation of P^{32} into pulmonary phospholipids in rats with sepsis[2] and dogs subjected to hemorrhagic hypotension[3,4] has been demonstrated. On the other hand, several investigators believe diminished surfactant activity under these circumstances is due to alveolar proteinosis. Surfactant is readily removed from the alveoli by irrigation with a protein solution, and areas involved by edema fluid show increased surface tension. Although the evidence is fragmentary and extrapolation to the clinical setting hazardous, it is obvious that the production of surfactant may be decreased under conditions of severe stress. This altered production may contribute to the deleterious effects of trauma, but cannot be construed as the primary cause of the syndrome.

Pulmonary Hemodynamic Changes. The pulmonary hemodynamic changes which occur in hemorrhagic shock and hypoxia have been studied extensively in the dog. Hemorrhagic hypotension is accompanied by a decrease in right atrial and pulmonary artery pressures and by no change, or a slight decrease, in left atrial pressure. During hypotension, pulmonary vascular resistance is increased, and it increases further after infusion of the shed blood, colloid or a balanced electrolyte solution. After resuscitation, right atrial pressure rises and remains elevated for at least 72 hours while the left atrial pressure remains low. Whether this increase in pulmonary vascular resistance is caused by postcapillary venous constriction or constriction of precapillary arterioles is unknown at present. It is worth mentioning now that the same hemodynamic changes could be explained by the occurrence of pulmonary microemboli, which will be discussed further in a subsequent section.

Just what causes this increased pulmonary vascular resistance has been the subject of many laboratory investigations. Willwerth[5] showed that the dog lung was protected from these adverse changes if the bronchus and pulmonary and bronchial arteries were occluded during the period of shock. No morphologic or functional changes were noted in the isolated lung after reperfusion, whereas congestive changes were noted in the non-occluded lung. These workers suggest that a circulating humoral substance is released during hypotension and metabolized during resuscitation, causing the pulmonary damage. Proctor,[6] however, has shown that shock alone will not produce typical lung lesions in the baboon, and that pulmonary congestion develops only after resuscitation. A neural mediator has been postulated to explain these hemodynamic changes. Denervation of the dog lung prior to the induction of hypotension protects this organ from the deleterious effects of shock, presumably by abolishing sympathetic constriction of small pulmonary veins. Other investigators have been unable to document this response. Moss,[7] using a cerebral perfusion technique, subjected dogs to cerebral hypoxemia without ischemia, acidemia or hypercarbia, while maintaining normal systemic blood pressure and oxygenation. All of the animals developed anatomic and functional pulmonary lesions, which were uniformly fatal and were similar to those found in the adult respiratory distress syndrome. The authors believe that the entire process is caused by spasm of the pulmonary veins caused by hypothalamic hypoxia.

Microembolism. In the past decade, a considerable body of literature has implicated pulmonary microembolism in the pathogenesis of respiratory failure after severe injury. In 1961, Swank[8] introduced the concept of screen filtration pressure, or the pressure required to force blood through a 20-micron micropore filter at a constant flow rate for 10 seconds. He found that citrated, whole blood had a high screen filtration pressure after 24 hours of storage, and that the screen filtration pressure increased steadily to the eighth to tenth day, at which time it became too high to measure. He also noted that 25 per cent of the platelets and leukocytes in fresh whole blood were removed by one passage through the filter. The particles trapped by the filter were generally less than 50 microns in diameter. Blood from which the platelets and leukocytes were removed did not develop an increased screen filtration pressure. This is of interest when one considers that the standard filters on blood administration sets have 170-micron filters which are incapable of trapping these aggregates. Two such filters are currently available: the Swank filter (Pioneer Filters, Hillsboro, Ore., a Dacron wool filter with 25 space), and the polyester mesh filter (Ultrapore: Pall Corp., Glen Cove, N. Y.).

Much of the clinical evidence favoring pulmonary microembolism as a cause of respiratory insufficiency comes from cardiovascular surgical units in which large volumes of exogenous whole blood are administered during cardiopulmonary bypass or by the intravenous route. Pulmonary microemboli have been

found repeatedly in the lungs of patients dying after cardiopulmonary bypass or massive transfusion. In addition, McNamara[9] measured the screen filtration pressure of infused, banked blood and of blood from the superior vena cava, femoral artery and femoral vein in battle casualties. He found that the screen filtration pressure was elevated until the blood had traversed both the pulmonary and the systemic capillary beds. Those patients dying soon after transfusion were found to have pulmonary microemboli composed of material similar to that found on the filtration screens. There was an inverse relationship between adequate postoperative pulmonary function and the quantity of blood infused; i.e., if 5,000 ml. of blood were infused over a short period of time, the PaO_2 was low. More recently, Reul and his associates[10] treated two groups of patients with multiple nonthoracic injuries, each of whom needed more than 10 units of blood. The incidence in the filtered group was 15%, compared to 50% for those patients with standard filters. With the transfusion of fresh, homologous blood, Nahas described immature plasma cells in the pulmonary interstitial space and alveoli, and proposed that an immune reaction from the transfusion of whole blood may cause pulmonary damage.

Pulmonary microembolism has been produced in experimental animals without transfusion. Endogenous microemboli may occur without blood transfusions. Foreign surfaces and tissue trauma with the release of fat, collagen and other tissue fragments may produce clotting and platelet aggregation. If one clamps the aorta in the dog, "regional shock" is produced which renders the lower extremities ischemic. After the aortic clamp is released, emboli consisting of platelet aggregates are found in the pulmonary capillaries.

At present, most investigators accord prime importance to the factor of microembolism in the production of post-traumatic pulmonary insufficiency.

Hypocarbia. Depression of the $PaCO_2$ due to hyperventilation is a recognized feature of shock and trauma and of the early phases of post-traumatic pulmonary insufficiency. This response may be related to increased production of catecholamines. Hyperventilation may also be due to a relative increase in the $PaCO_2$ in the region of the medullary respiratory center. Although the reason for this response remains unknown, it may represent an autonomic survival mechanism. Recently, hypocarbia has received attention as an aggravating factor, as well as a recognizable feature of pulmonary insufficiency developing after trauma. Hypocarbia causes bronchospasm, both by vagal pathways and by direct action on bronchial smooth muscle. Bronchospasm in a severely injured patient may lead to a maldistribution of air, an increase in airway resistance, an increase in the work of breathing, and a significant ventilation perfusion abnormality. Improvement in the alveolar-arterial oxygen gradient has been reported by Trimble[11] in patients with post-traumatic pulmonary insufficiency after the addition of 3 per cent CO_2 to the inspired gas mixture and careful regulation of the $PaCO_2$.

Consequences of Resuscitation. In recent years, there has been an increase in the use of buffered electrolyte solutions for the initial resuscitation of patients in hemorrhagic shock. These solutions are readily available at a reasonable cost. However, the intravascular half-life of crystalloids is short, and some have estimated that only 17 per cent of such a solution remains in the intravascular space after two hours. It is a widespread belief that large amounts of crystalloid can be infused safely, despite well-documented data indicating that overloading of the extracellular fluid space can occur in the presence of a normal central venous pressure. In 1896, Starling[12] described three factors influencing trans-capillary fluid exchange: (1) the difference in transcapillary hydrostatic pressure; (2) transcapillary protein osmotic pressure; and (3) the properties of the capillary membrane which influence active fluid transfer. Recent experimental work has related this hypothesis to capillary water exchange in the lungs. Garr, using an isolated dog lung with controlled perfusion

pressure, demonstrated that the onset and rate of edema formation was determined by the difference between transcapillary pressure and plasma osmotic pressure. Levine confirmed these findings, using an intact animal and a left atrial balloon to vary left atrial pressure. Motsay found the lung to have a propensity to extravascular extravasation of fluid. In experimental models, the administration of large volumes of electrolyte solution causes a reduction in the colloid osmotic pressure, with resultant transcapillary fluid movement and interstitial pulmonary edema. Giordano[13] reported substantial improvement in pulmonary function after the infusion of albumin in nine critically ill patients with patchy interstitial edema. All the patients had hypoalbuminemia and had failed to improve with positive pressure breathing or with the administration of diuretics. Fleming and Bowen[14] demonstrated an improvement in pulmonary compliance and PaO_2 after the administration of furosamide to a group of battle casualties. Fluid balance records and the urinary responses to furosamide suggested that overhydration was the cause or at least a necessary component of pulmonary insufficiency. This would appear to be a problem of lowered protein osmotic pressure. On the other hand, serious pulmonary problems are uncommon following resuscitation from the hypovolemic shock of cholera, in spite of the use of large quantities of electrolyte solution in the face of hypoproteinemia. Moreover, experiments with primates have shown no difference in the total amount of lung water after resuscitation with balanced electrolytes, colloid solutions or whole blood.

Increased Pulmonary Vascular Permeability. In addition to the decreased osmotic pressure, factors affecting vascular permeability must be considered. Experimental animals in hemorrhagic shock develop edema of the interstitial collagen fibers without capillary damage, and blunt thoracic trauma is associated with an increase in pulmonary vascular permeability. In addition, vasoactive amines are increased in hemorrhagic shock, and these are known to cause an increase in vascular permeability. Recent experimental and clinical work with burns indicates that a diffuse increase in capillary permeability develops, including the pulmonary capillaries. Increased capillary permeability may also be an important factor of the respiratory insufficiency which occurs with acute pancreatitis. Further work in this area may result in some new and important information regarding this phenomenon.

Sepsis. Sepsis commonly occurs prior to the demise of patients dying of progressive pulmonary insufficiency after trauma. The site of sepsis may be the lungs because of tracheostomy, aspiration and an inadequate cough reflex. It has been recognized with increasing frequency, however, that remote sepsis, such as peritonitis, may cause or aggravate respiratory failure. In a clinical and laboratory investigation by Clowes,[15] patients dying of peritonitis were found to manifest progressive hypoxia and evidence of ventilation-perfusion abnormalities associated with pulmonary hypertension, decreased $PaCO_2$ and a mixed metabolic-respiratory alkalosis. Similar hemodynamic and pathologic findings were found in dogs. On postmortem examination, Clowes observed alveolar septal edema with leukocytic infiltration. Polymorphonuclear cells were also observed to adhere to the capillary endothelium. Focal atelectasis and patchy areas of periarterial and peribronchial hemorrhage were noted. Clowes relates these changes to the release of vasoactive compounds or other factors which lead to pulmonary capillary aggregation of cellular debris. Our own experience with remote sepsis would indicate that it is an aggravating factor, rather than a causative one. Frequently, ongoing respiratory failure is due to remote sepsis, though this sepsis was not present at the time of the onset of respiratory failure. In a patient who has extensive abdominal surgery, and in whom there is persistent respiratory failure, we look in earnest for a subphrenic or other intraabdominal abscess.

Oxygen Toxicity. Experimental animals breathing 100 per cent oxygen at 1 atmosphere pressure die in 6 to 94 hours. The first micro-

scopic change noted is interstitial edema around blood vessels, which is seen within 48 hours in the dog. Later, interstitial edema becomes extensive, with alveolar accumulation of erythrocytes, leukocytes and cellular debris, and finally hyaline membranes are formed.

Most attempts to study pulmonary oxygen toxicity in man have been confined to observations on healthy volunteers and retrospective evaluation of patients who died after being on a ventilator for a time. In a recent prospective analysis, Barber[16] compared pulmonary functions in a group of patients with normal lungs but irreversible brain damage, who were given either room air or 100 per cent oxygen by positive pressure ventilation. After 30 hours of ventilation, the group receiving pure oxygen exhibited an increased alveolar-arterial oxygen gradient compared to the group receiving room air. Intrapulmonary shunting and the ratio of dead space to tidal volume were likewise greater in the group receiving pure oxygen. Morphologic changes in the lungs were minimal, however.

The contribution of oxygen toxicity to post-traumatic pulmonary insufficiency will likely remain difficult to define. Every patient with this type of respiratory failure is exposed to high inspired O_2 tensions when adequate oxygenation becomes increasingly difficult. Though there is little doubt that the high O_2 concentrations to which these patients' lungs are exposed cause further impairment of pulmonary function, these effects are produced when progressive pulmonary insufficiency has already become manifest.

Fat Embolism. Fat macroglobulinemia occurs as frequently after minor operations or a variety of medical illnesses as after those injuries commonly associated with clinical fat embolism. Likewise, the occurrence of this phenomenon in seemingly minor fractures has been demonstrated. Recent studies have confirmed hypoxemia in patients with the syndrome of systemic fat embolization. Experimental fat embolization will produce wet, heavy, congested, atelectatic lungs, but there is no agreement on the pathologic changes associated with fat embolism in the lungs of humans. Most investigators now feel that, in the absence of major fractures, this entity is probably not a significant factor in the development of pulmonary insufficiency following trauma.

Tracheostomy. Tracheostomy often plays an important role in the outcome of the syndrome of post-traumatic insufficiency. The airway is exposed to air-borne contaminants, the natural protective mechanisms are attenuated, and the ability to cough is ablated. Infection is an inevitable consequence of tracheostomy, despite meticulous aseptic technique. Dr. Moore[1] regards the need for tracheostomy as a grave prognostic sign, not only because of the degree of pulmonary insufficiency that it implies, but also because of the infection attendant to the procedure. Organisms are introduced directly through the tracheostomy and around it through aspiration. Maloney demonstrated oral digestive enzymes in tracheal aspirates, indicating subclinical aspiration of saliva.

Aspiration. Victims of trauma have an increased risk of aspiration, and this may play a role in post-traumatic pulmonary injury. Trauma is frequently associated with an altered level of consciousness and, by virtue of its unexpected nature, occurs in patients whose gastrointestinal tracts often contain recently ingested food. There is clinical evidence that unrecognized aspiration of gastric contents does occur.

Miscellaneous Factors. Many other factors may affect the course of respiratory failure after trauma. These include: (1) pre-existing cardiac or pulmonary disease; (2) abdominal incisions or distention, causing disordered ventillatory mechanics; (3) sepsis introduced through urinary, endotracheal and intravenous catheters; and (4) 2-3 diphosphoglycerate deficiency in stored whole blood.

Comments. Severe pulmonary insufficiency develops for many reasons in patients who have sustained trauma. This clinical complex probably has many causes (Table 1), and predictable pathophysiologic sequences are diffi-

TABLE I

THE CAUSE OF RESPIRATORY FAILURE FOLLOWING TRAUMA

I. Pre-existing cardioc or pulmonory diseose.

II. As o result of injury ond shock.

Diminished pulmonory surfoctont production
Increosed pulmonory vosculor resistonce
Hypocorbio
Increosed vosculor permeobility
Plotelet microemboli
Fot embolism
Clinicol or subclinicol pulmonory contusion
Trocheol ospirotion of gostric contents
Sepsis-systemic/pulmonory
Disordered respirotory mechonics

III. As o result of treotment

Sepsis (from intubotion, introvenous cotheters)
Hypocorbio occurring during respirotory support
Oxygen toxicity
Overhydrotion (hemodilution)

cult to define. The lung is susceptible to many types of insult, apparently responds to protean injuries in a similar manner, and can recover.

After an extensive discussion of etiology, a brief comment regarding treatment seems appropriate. It is clear that, given the multifactorial etiology, treatment must be aimed at both prevention and amelioration of the causes. There are, unfortunately, some factors over which the surgeon has no control. For example, the depth and degree of shock, as well as the effect that this shock has on the pulmonary vascular resistance and upon pulmonary capillary permeability, are factors that can be dealt with only after the fact. In a previous paper,[17] Dr. Nolan and I have described a "utilitarian approach" to this problem which is based on those factors which we know to be important.

The most important thing that one can do is to anticipate pulmonary failure in all patients subjected to severe trauma, long surgical procedures and the transfusion of large amounts of whole blood. In this group of patients, pulmonary failure is a predictable eventuality. The single most valuable laboratory test is the arterial blood gas analysis, and these should be done every eight hours immediately following injury.

An argument can be made for the early and more liberal use of colloid containing solutions, such as albumin and plasma, and for the early replacement of blood loss with fresh whole blood, rather than balanced electrolyte solutions. To severely ill or injured patient who, for any reason, has hypoalbuminemia may show marked improvement in pulmonary function by the massive infusion of albumin. When replacing blood loss, the physician should be aware of the limitations of central venous pressure measurements as an indication of circulatory blood volume. The adequacy of blood volume should be gauged by the patient's pulse, blood pressure and urine output, as well as central venous pressure. A common error is to gauge fluid replacement solely by central venous pressure, and to overload patients to extremes.

TABLE II

UTILITARIAN APPROACH TO PREVENTION AND TREATMENT OF RESPIRATORY FAILURE FOLLOWING TRAUMA

1. Aggressive pulmonary management in all patients with trauma.
2. Early and vigorous respiratory support of patients with known cardiac and pulmonary disease.
3. Knowledge of limitations of central venous pressure measurements.
4. Colloid containing solutions in addition to balanced electrolyte solutions.
5. Early use of diuretics in patients with possible fluid overload.
6. Prevention and vigorous treatment of fat embolism.
7. Prevention of aspiration.
8. Early use of volume respirators for respiratory insufficiency.
9. Measures to diminish inspired oxygen concentration requirements.
10. Adequate filters during massive blood transfusions.
11. Aseptic tracheobronchial toilet once intubation is necessary.
12. Vigorous treatment of regional and systemic infection.
13. Prevention abdominal distention and other causes of disordered respiratory mechanics.

Early and vigorous respiratory support should be provided for patients with pre-existing cardiac or pulmonary disease. In patients who have received large amounts of balanced electrolyte solution during resuscitation, consideration should be given to the use of diuretics, especially when there is clinical evidence of presacral or periorbital edema,

diminished pulmonary compliance or increasing alveolar-arterial oxygen gradients.

The use of adequate filtration systems is vital when large quantities of whole blood are given during resuscitation. The aspiration of gastric contents can be prevented by the early use of nasogastric suction. Splinting of fractures should be undertaken early to prevent fat embolism, and this entity should be suspected, recognized and treated early with intravenous dexamethasone. Volume controlled ventilation should be instituted early in patients with signs of post-traumatic respiratory failure. If tracheal intubation is necessary, there must be vigorous aseptic tracheal toilet.

The inspired oxygen concentration can be minimized by the use of positive end-expiratory pressure and careful regulation of the $PaCO_2$. Local and systemic sepses are treated by drainage of loculated infections, and by the administration of systemic antibiotics. Probably the most important factor is the anticipation of pulmonary insufficiency in any injured patient, and the early institution of appropriate treatment.

Remarks

Dr. Stanton P. Nolan: This was an excellent presentation of the historical, experimental and clinical data that form our knowledge of this problem today.

You began with a discussion of Dr. Moore's report, which was based on a group of patients studied 10 or 12 years ago, and it's very interesting. He describes a situation that I hope most of us will never see again; these were patients that were untreated by any standard that we would consider adequate today. In fact, he was following untreated patients with pulmonary insufficiency for five to seven days, and reporting the outcome.

You mentioned that pulmonary deaths were frequent in the intensive care unit. I think they are, but the salvage rate for patients that are admitted with known chest trauma has been excellent. Our problem is the patient with unanticipated pulmonary problems. These are the ones that are in difficulty several days later. Here we end up intubating and placing the patient on a respirator when he is moribund.

It is somewhat controversial, but in the experimental studies, there is increasing agreement today that the extrapolation from dogs to the human is unjustified. While we depended on information from dogs in the past, the studies from primates are turning out to be better analogues of the human situation.

You mentioned the use of Ringer's lactate. We went through a "white-blood" era 10 or 12 years ago, and it was rather striking. At that time, when we performed a major operation, it was usual for the anesthesiologist to bring a case of Ringer's lactate to the operating room.

Your emphasis on anticipation of the problem is important, and at a recent symposium of directors of Trauma Study Centers, around the country, there was unanimous agreement that post-traumatic pulmonary insufficiency is a *preventable* condition, not just treatable. The only way to prevent it is using the history and the clinical picture to anticipate which patients are at risk. If this is done, in nearly all cases, one should be able to prevent the development of the syndrome.

Dr. Gerald T. Golden: There are some features that are beyond our control: namely, the effects of pre-existing shock on the pulmonary vascular resistance and on the pulmonary capillary permeability. I have no way of proving this, but I think that there is an adverse pulmonary effect from shock that can't be undone, and I do not think that you would, by any method of treatment, be able to prevent all cases of pulmonary insufficiency.

Dr. Nolan: You are describing the patient who has been in severe shock for several hours before he arrives at the Emergency Room. These are the patients that may not survive 48 or 72 hours; but if you can get the shocked patient to the Emergency Room rapidly, resuscitate him and do it in good order without fluid overload, get him to your intensive care unit if you are anticipating respiratory problems, and institute ventilation immediately,

you may be able to prevent a good many of the problems that you have described.

You mentioned increased capillary permeability. I have not learned how to anticipate this, and I wish someone could tell me a measurement that could be used consistently. This is one condition in which colloid loading should not be used. In these patients, if you can identify them, you must be cautious in giving albumin or plasma for volume loading because the colloid goes out into the tissues and then you produce a diffusion block that takes a long time to reverse, if it's reversible.

When you say you routinely use diuretics on the patient that has undergone a long operation or received large amounts of fluid in the operating room, aren't you really treating an oversight? Should this be routine, or should you have given the proper amount of fluid in the first place? Does it make sense to spend four hours in the operating room loading the patient with fluid, and then half an hour later you are administering powerful diuretics that deplete potassium—and to get rid of the water that you didn't need to give in the first place?

Dr. Golden: I think what you say is true. Frequently patients are unknowingly overloaded; that is, they receive clearly too much buffered electrolyte solution. But there are situations in which buffered electrolyte solution is preferable to using nothing at all; during a sudden disaster, when enough whole blood is not available for five or ten minutes, I think that you have to give fluid. By the same token, for someone who arrives in the Emergency Room with a systolic blood pressure of 60 mm of mercury, two liters of Ringer's lactate may be the treatment of choice. I would advocate treating this type of overloading with furosamide.

Dr. Ivan K. Crosby: I think you are talking about two somewhat different things. The pulmonary insufficiency secondary to massive transfusions, which is classified as a type of adult respiratory distress syndrome, is different and is preventable, as Dr. Nolan mentioned; but the patient with severe chest trauma who is admitted with a large lobar hematoma, and who despite immediate positive pressure ventilatory support goes on to develop an opaque lung on x-ray despite treatment with colloid infusions and steroids, is not entirely preventable. Depending on the etiology of the particular type of distress, it may or may not be preventable.

Dr. Nolan: I will disagree with you, but really on the basis of definitions. "Post-traumatic pulmonary insufficiency" *never* refers to a contused lung. It does not refer to the direct trauma; it refers to what happens in the remainder of the lung that otherwise should have been normal, that was not insulated by direct trauma. The opacification of the lung that has been badly contused, or is hemorrhagic because of direct trauma, is one type of injury; but when the other lung becomes involved with a diffusion problem, then you have post-traumatic pulmonary insufficiency.

Dr. Crosby: I think that is true, except in severe deceleration injury, where both lungs are damaged, albeit not radiographically. They are damaged, and the subsequent management of a ruptured spleen, or other organ injury, may, with massive transfusions or infusions, give an outpouring of fluid into the interstitium of the damaged, but radiologically normal, lungs. It is difficult to categorize these as two separate entities.

Dr. Nolan: Again, I want to disagree partly, because some of this relates to a problem that Dr. Golden did not mention in the clinical diagnosis. In post-traumatic pulmonary insufficiency, until there is an increased capillary permeability or sepsis, the lung will remain normal by x-ray. This is similar to the old "post-pump" lung, in which the x-ray was entirely normal, but the patient's PO_2 was 30 mm of mercury.

We are arguing over definitions, and maybe it is not pertinent. Dr. Chandler, I wonder if you don't have some comments, based on your experiences in Vietnam.

Dr. James G. Chandler: I was actually one of the people who produced many of the "Da Nang Lung" patients, because we were advocates of giving liberal amounts of Ringer's

lactate along with blood replacement. That was at the tail end of the "white blood" period, essentially 1966. Several things came out of that experience. The most interesting fact was that it wasn't cases which involved thoracic injury that gave trouble because everybody, at other places as well as our own, began to treat those patients in anticipation of pulmonary problems before they actually developed. It was usually the patients with abdominal problems, or extensive mine injuries of the extremities, who got into trouble; and they were well studied by several of my good friends, Dick Simmons, John Collins and Bill Fleming.

What they found were two prominent causative factors. The first was a common background of potential embolization from venous stagnation or the resuscitative measures that were required, and from fat liberated by fractures. The second factor implicated was the relationship that Dr. Golden alluded to between cerebral hypoxia or an acute increase in intracranial pressure and the rapid accumulation of excessive interstitial lung water. The studies that grew out of this experience would fulfill your criteria of having been done in subhuman primates. In the experimental preparation, about 20 per cent of the animals developed acute pulmonary edema within 30 minutes when their intracranial pressure was suddenly increased by inflating a balloon in the extradural space.

I think the emphasis that you have placed on early treatment is most appropriate. You know, Starling's hypothesis, which is always invoked here, probably has little to do with the lung that has already been damaged; in other words, once the capillary bed is damaged. there is no grading any more that is responsive to colloid osmotic pressure. Most of our treatment is aimed at getting out of what we think of as extra interstitial lung water. Our method for doing that is either to use diuretics, to decrease all extracellular water, hoping to draw some of it from the lungs, or to give colloid, specifically in a concentrated form, to draw interstitial water back into the vascular space. But I don't believe that's effective at all in the areas where the capillary permeability is altered, which is just about at the point when you would decide that absolute criteria for ventilator support are present. That probably is the most compelling reason to treat early, namely because therapy, as we know it today, is not very effective once the process has been allowed to develop fully.

Dr. Robert M. Mentzer, Jr.: Obviously one of the major problems in attempting to study pulmonary insufficiency in the laboratory is that we do not have a good model in which we can give drugs, study modalities of therapy or study the hemodynamics of the pulmonary bed in pulmonary insufficiency. The closest we have come to a true human analogue is a response called localized alveolar hypoxia, which produces a marked pulmonary vasoconstriction. Pulmonary insufficiency is related to shunting of blood, blood that's going to areas that are not oxygenated within the lung, or where there is adequate oxygen but no blood supply. What is the mechanism, or the biochemical mediator of pulmonary vasoconstriction?

Many mediators have been proposed. One that is interesting in light of our discussion is the proposal by Staub and others in California, who feel that pulmonary hypoxia producing localized vasoconstriction and shunting is mediated by histamine, which has been recognized as a potent vasoconstrictor of the pulmonary bed for some time.

It has been shown in animals that histamine causes a marked pulmonary vasoconstriction, and a rise in pulmonary artery pressure. On the other hand, if you give a histamine-depleting substance, the hypoxic response is eliminated.

References

1. Moore, F. D., Lyons, J. H., Pierce, E. C. Jr., Morgan, A. P., Drinker, P. A., MacArthur, J. D. and Dammin, G. J.: Post-Traumatic Pulmonary Insufficiency. Philadelphia: W. B. Saunders Co., 1969.
2. Rubin, J. W., Clowes, G. H. A., Macnicol, M. F. and Gavin, J. W.: Impaired pulmonary surfactant synthesis in starvation

and severe nonthoracic sepsis. Am. J. Surg. 123: 461, 1972.
3. Henry, J. N., McArdle, A. H., Bounous, C., Hampson, L. G., Scott, H. J. and Gurd, F. N.: The effect of experimental hemorrhagic shock on pulmonary alveolar surfactant. J. Trauma 7: 691, 1957.
4. Henry, J. N., McArdle, A. H., Scott, H. J. and Gurd, F. N.: The study of acute and chronic respiratory pathophysiology of hemorrhagic shock. J. Thorac. and Cardiovasc. Surg. 54: 666, 1967.
5. Willwerth, B. M., Crawford, F. A., Young, W. G. and Sealy, W. C.: The role of functional demand on the development of pulmonary lesions during hemorrhagic shock. J. Thorac. and Cardiovasc. Surg. 54: 658, 1967.
6. Proctor, H. J., Moss, G. S., Homer, L. D. and Litt, B. D.: Changes in lung compliance in experimental hemorrhagic shock and resuscitation. Ann. Surg. 169: 82, 1969.
7. Moss, G., Staunton, C. and Stein, A. A.: Cerebral etiology of the "shock lung syndrome." J. Trauma 12: 885, 1972.
8. Swank, R. L.: Alteration of blood on storage: Measurement of adhesiveness of "aging" platelets and leukocytes and their removal by filtration. New Eng. J. M. 265: 728, 1961.
9. McNamara, J. J., Molot, M. D. and Stremple, J. F.: Screen filtration pressure in combat casualties. Ann. Surg. 172: 334, 1970.
10. Reul, G. J., Greenberg, S. D., Lefrak, E. A., McCollum, W. B., Beall, A. C. and Jordan, G. L.: Prevention of post-traumatic pulmonary insufficiency. Arch. Surg. 106: 386, 1973.
11. Trimble, C., Smith, D. E., Rosenthal, M. H. and Fosburg, R. G.: Pathophysiologic role of hypocarbia in post-traumatic pulmonary insufficiency. Am. J. Surg. 122: 633, 1971.
12. Starling, E. H.: On the absorption of fluids from connective tissue spaces. J. Physiol. (London) 19: 312, 1896.
13. Giordano, J. M., Joseph, W. L., Klingenmaier, C. H. and Adkins, P. C.: The management of interstitial pulmonary edema. J. Thorac. and Cardiovasc. Surg. 64, 739, 1972.
14. Fleming, W. H. and Bowen, J. C.: The use of diuretics in the treatment of early wet lung syndrome. Ann. Surg. 175: 505, 1972.
15. Clowes, G. H. A., Farrington, G. H., Zuschneid, W., Cossette, G. R. and Saravis, C.: Circulating factors in the etiology of pulmonary insufficiency and right heart failure accompanying severe sepsis (peritonitis). Ann. Surg. 171: 663, 1970.
16. Barber, R. E., Lee, J. and Hamilton, W. K.: Oxygen toxicity in man: A prospective study in patients with irreversible brain damage. New Eng. J. M. 283: 1478, 1970.
17. Golden, G. T., Allen, J. T. and Nolan, S. P.: Factors influencing pulmonary function after severe injury. Am. Surg. 40:266, 1974.

Clinical Center Study of Patients with Ewing's Sarcoma

The cooperation of physicians is requested in the referral of patients with Ewing's Sarcoma for a continuing study of adjuvant chemotherapy, measurement of immune competence and immunotherapy being conducted by the Radiation Branch of the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients who have received no treatment are preferred, but selected patients with previous therapy (irradiation or surgery of the primary tumor) will also be accepted for admission as inpatients. Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings.

Physicians interested in having their patients considered for admission to this study may write or telephone: Thomas C. Pomeroy, M.D., or Ralph E. Johnson, M.D., Clinical Center, Room B3B38, National Institutes of Health, Bethesda, Maryland 20014, Telephone: (Area Code 301) 496-5457.

Correspondence . . . .

The Aggressive Optometrist

To the Editor:

I read with interest the Guest Editorial in the April issue of the Virginia Medical Monthly, entitled "The Aggressive Optometrist."

It is unfortunate that the author has lost, or perhaps never gained, the insight as to the optometrist's role in serving the public in a country that he admitted has never had it so good with health care services.

He sighted as an example the attempt by optometrists to assume the role of ophthalmologists. Isn't it the other way around? The ophthalmologists are practicing optometry. Many ophthalmologists are refracting the majority of the time they spend in their offices. Some even have technicians and automatic refractors to refract so they can see more patients a day (the almighty dollar . . . . .). An optometrist spends years learning functional vision, analysis, etc. . . . . Certainly this practice by ophthalmologists is not in the best interest of their patients. I had the feeling when reading his editorial that he was not concerned with public welfare in the least.

How about the statement about optometrists "plying their trade honestly." It was just a few years ago that ophthalmologists were caught receiving kickbacks from optical laboratories. What a short memory our author has.

There are many ophthalmologists that perform not only all of the services of an optometrist, but of opticianry as well. They refract, fit glasses, repair frames, etc., right in their own offices. They certainly could be utilizing their time for medicine. Fortunately, with the wonder drugs on the market today, there is less eye pathology. So, many ophthalmologists have had to practice optometry or lower their standards of living. Isn't it a pity that the only one that suffers is the patient.

There are just too many ophthalmologists profiting handsomely from quickie refractions and unnecessary office visits. Perhaps the author doesn't understand why low plus prescriptions are sometimes prescribed. But then, how could he . . . . . he didn't have the extensive training an optometrist has in functional vision. Ophthalmologists are not as qualified in refracting as optometrists. That they should be equated to optometrists is an overt deceit, conducted by the political forefront of ophthalmologists.

Yes . . . . . the optometrist is aggressive. We are a dedicated profession. That is one of the reasons why this nation has never had it so good with health care services.

Ronald H. Yaffe, O.D.

July 26, 1974
213 East Grace Street
Richmond, Virginia 23219

To the Editor:

When one states a well-founded point so positively, one finds the adversary quibbling with side issues and missing the essential message. I have no intention of becoming involved in a constant warfare of petty ingenuities with optometrists, but Dr. Jaffe should realize that it is deceitful, dangerous, and not in the best interest of the patient for any practitioner to attempt to exceed the limits of his education. It becomes a common concern to all when any group, in this case political optometry, overlooks their educational deficit and begins a program of legislative justification and judicial fiat.

Keith W. McNeer, M.D.

5700 West Grace Street
Richmond, Virginia 23226

Public Health....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

October—Immunization Action Month

For the second year, October has been designated "Immunization Action Month" by a host of public and private health agencies, voluntary service groups, pharmaceutical firms, and the Center for Disease Control in Atlanta.

The goal of Immunization Action Month is to establish and maintain awareness among public and private health care providers of the need for continuing immunization of children ages 1 through 4. Immunization levels have declined. In 1973 some 5.8 million children in this age group were unprotected against at least one or more of the following: polio, measles, rubella, diphtheria, pertussis and tetanus.

Immunization levels for polio dropped to 60.4% last year, compared to a high of 84.1% in 1963. Among nonwhite children in inner-city areas, only 40.3% had received three or more doses of oral polio vaccine, according to a 1973 national survey. The problem is not limited to the inner-city; a 1972 survey showed only 68.3% of 1-4 year-olds in suburban areas were adequately protected against polio.

Other types of standard childhood immunizations show the same alarming decrease. In 1972, 10 years after the development of an effective measles vaccine, only 62.2% of preschoolers had received the immunization. Last year, it was down to 61.2%.

Physicians, public and private, can do much to aid this effort. At the heart of the immunization problem in America today is the inadequately protected child.

All of us are aware of parents who start their child's series, but fail to complete. To identify these children, we encourage the auditing of preschoolers' records and the notification of parents where deficiencies occur. A stick-on form is available that can be attached to the front of medical records for readily visible immunization audit. There will be much publicity at the National and State level to support this effort as the audit is the thrust of the October campaign.

Unfortunately, Virginia's compulsory immunization law is nearly impossible to enforce. We would have no need for Immunization Action Month if compliance was widespread. Section (a) of the State Board of Health Law 32-57.1, as amended in 1972, states, "The State Board of Health shall cause each child within this State to be immunized against certain communicable diseases by being administered vaccines as follows: diphtheria, tetanus, whooping cough, poliomyelitis vaccines before attaining the age of one year; measles (rubeola) and German measles (rubella) vaccines before attaining the age of two years. Vaccines shall be administered in adequately immunizing doses as determined by the standards of the United States Public Health Service."

Progress has been made in the immunization of preschool age children throughout the State, even though levels of protection vary considerably from region to region. There has been a decreased morbidity in major diseases of childhood in recent months. For example, as of August 13 only 19 cases of measles had been reported in 1974. On that date in 1973, 410 cases had been reported.

Our charge is clearly indicated. Children of preschool age are at risk. Physicians are urged to cooperate in this renewed effort and observance of Immunization Action Month.

Mental Health . . . .

WILLIAM S. ALLERTON, M.D.

Involuntary Admission to State Mental Hospitals

There have been numerous inquiries about the new involuntary admission statute which became effective September 1, 1974. Set forth below is a summary of the provisions of the new law as found in § 37.1-67.1 of the Code of Virginia (1950), as amended.

(1) A person alleged to be mentally ill and in need of hospitalization must be 14 years of age or older before subject to the order of a justice that he be brought before him. The term "mentally ill" specifically excludes those who are mentally deficient or mentally retarded.

(2) The person alleged to be mentally ill may be detained for 48 hours before a hearing. Prior to the hearing, he is to be informed of his right to apply for voluntary admission; a preliminary hearing must be held to determine whether he is willing and able to seek voluntary admission.

(3) If application for voluntary admission is not requested, the person is to be informed of the legal basis for his detention. He must be told of his right to a hearing, his right to counsel, the right of appeal from such hearing and the right to trial by jury on appeal. He is to be informed of the place, time, date of the hearing and his attorney given adequate time to prepare, a minimum of 24 hours.

(4) The person subject to the hearing has the right to obtain independent evaluation and expert opinion and to summons witnesses, as well as the right to prepare any other defenses he may have.

(5) If the justice accepts written certification of the findings of a physician as to whether the person is mentally ill, presents an imminent danger to himself or others, or requires hospitalization, such findings must be based on an examination personally made by the physician within the preceding five days.

(6) The justice, before ordering the person committed to a hospital, must specifically find that he is a danger to himself or others as a result of mental illness, has threatened or attempted to take his own life, or is too mentally ill to care for himself, *and* that after investigation no less restrictive alternatives to hospitalization were found suitable.

(7) The involuntary commitment shall be for a period not to exceed 180 days; extension of such commitment shall be by further petition and court order or by voluntary application for continued treatment.

(8) All persons involuntarily committed who were not charged with crime shall become voluntary admissions as of November 1, 1974, unless involuntarily committed by a new hearing and order.

(9) Those persons found subject to involuntary commitment but not in need of hospitalization for purposes of treatment may be ordered by the court to submit to outpatient treatment, day treatment in a hospital, night treatment in a hospital, referral to a community mental health clinic, or other appropriate treatment modalities.

These changes were brought about by a requirement to update, clarify and modernize the procedures for involuntary admissions and to reduce the number of inappropriate admissions to the State Mental Hospitals.

ALLERTON, WILLIAM S., M.D., *Commissioner, Department of Mental Health and Mental Retardation.*

All of these mammals, except one, can synthesize vitamin C

Woman (man) cannot.

Human beings can neither synthesize vitamin C nor store most of the water soluble vitamins. They should be replenished continuously.

Normally, people accomplish this in their daily diet. But under conditions of illness, stress, in convalescence or following surgery, vitamin stores may be depleted or metabolic demands increased.

In such cases, Surbex-T may be indicated. Surbex-T makes it easy and convenient to restore the water-soluble vitamins. Each tablet provides 500 mg. of vitamin C plus high potency B-complex.

Where nutritional status must be preserved, Surbex-T can help restore what the body *cannot* effectively store. 403482

ABBOTT

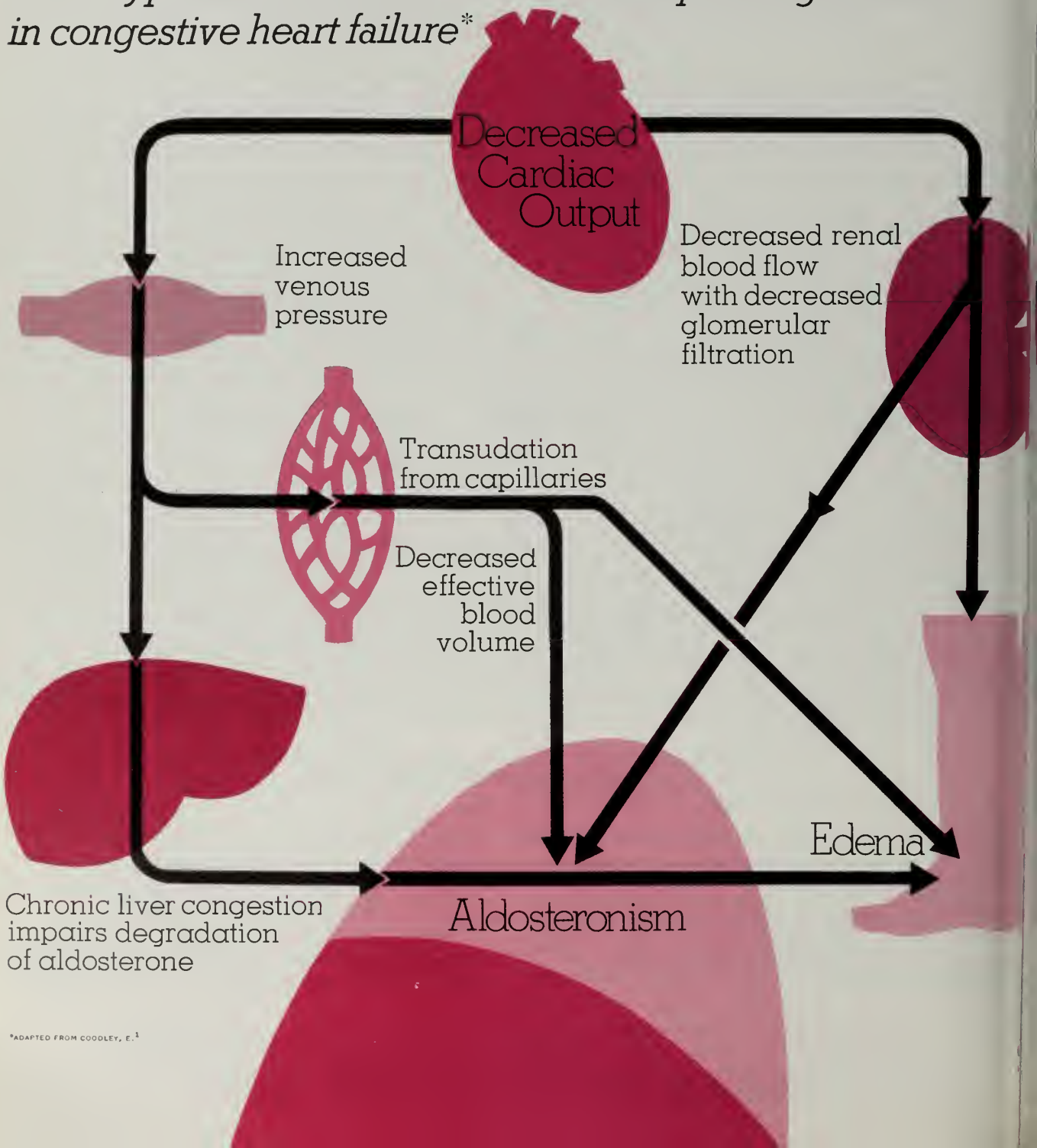
SURBEX-T® 500 mg. of Vitamin C with High Potency B-Complex

Restores what the body cannot effectively store

In congestive heart failure...

secondary aldosteronism

*How hyperaldosteronism leads to and prolongs edema in congestive heart failure**



*ADAPTED FROM COODLEY, E.[1]

s a primary factor

To "switch off" the aldosterone factor in congestive heart failure

Aldactone

spironolactone 25-mg. tablets

the only specific aldosterone antagonist... basic in all diuretic therapy

Three ways to use Aldactone in congestive heart failure

. As the only diuretic

- Often sufficient alone.
- Produces gradual, sustained diuresis by locking aldosterone action in the distal enal tubule.
- Avoids potassium loss.

. As the basic daily diuretic with an "add-on" lternate-day-diuretic ("A.D.D." schedule)

- Can be administered daily as basic nerapy with the additional agent urosemide or ethacrynic acid) given very second or third day.
- Aldactone plus "A.D.D." schedule inimizes potassium deficiency and otentiates effect of "add-on" diuretic.[2]
- Avoids acute volume depletion and ldosterone rebound.[2]

As a daily diuretic in combination with daily dose of a thiazide

- Permits daily additive diuretic effect hile maintaining potassium balance.

Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone (spironolactone), particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops. **Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.**

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 percent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, inability to achieve or maintain erection, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For **essential hypertension** in **adults** the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient.

For edema, ascites or **effusions** in **adults** initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For **children** the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight.

References: 1. Coodley, E.: Consultant 12:106-107, 109, 111, 113, 115 (July) 1972. **2.** Thorn, G. W., and Louler, D. P.: Am. J. Med. 53:673-684 (Nov.) 1972.

SEARLE Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department
Box 5110, Chicago, Illinois 60680

311

The Role of the Detail Man

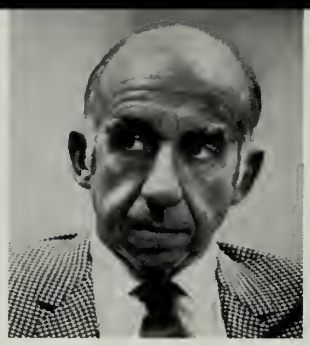
Opinion & Dialogue

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about tne detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this countr there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center research people, and academic people have and that's in all likelih on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent film produced by the pharmaceutical industry. When they function in th

He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

The Medical Society of Virginia . . . .

Minutes of Council

A meeting of the Council of The Medical Society of Virginia was held at Richmond's Howard Johnson's "Midtown" Motor Lodge on Wednesday, July 31.

Members Present: Dr. John A. Martin, Dr. William R. Hill, Dr. Carl E. Stark, Dr. Raymond S. Brown, Dr. Mack I. Shanholtz, Dr. Harry J. Warthen, Dr. William J. Hagood, Jr., Dr. Harold L. Williams, Dr. Charles E. Davis, Jr., Dr. Carrington Williams, Jr., Dr. George J. Carroll, Dr. Girard V. Thompson, Sr., Dr. H. C. Alexander, III, Dr. George M. Nipe, Dr. Thomas L. Lucas, Dr. James Hal Smith and Dr. W. Leonard Weyl.

Others Present: Dr. James C. Respess, 2nd Vice-President; Dr. James S. Kitterman, 3rd Vice-President; Dr. K. K. Wallace, Jr., Vice-Speaker; Dr. Walter A. Eskridge, Dr. Gervas S. Taylor, Jr., Dr. Charles M. Caravati, Jr., Dr. Anthony J. Munoz, Dr. Harry C. Kuykendall, and Dr. C. Barrie Cook, Vice-Councilors; Dr. W. Callier Salley, Dr. William S. Hotchkiss and Dr. Michael A. Puzak, AMA Delegates; Dr. Percy Wootton and Dr. F. Ashton Carmines, Alternate AMA Delegates; Dr. John R. Jones, Executive Associate Dean (representing Dr. Warren H. Pearse, Dean), Medical College of Virginia; Mr. Gary Miller (representing MCV Student Medical Society); Mr. Guy D. Beaumont, Jr., AMA Field Service representative; Mr. Robert G. Stuart, Executive-Secretary, Va-MPAC; and Mr. William R. Miller, Attorney.

Minutes of Last Meeting

The minutes of the last meeting of Council on March 31 were *approved as written.*

Continuing Education

Dr. Davis presented a progress report for his Commission on Continuing Education and indicated that a proposed plan for continuing education in Virginia will be ready for Council at its next meeting. The Commission has a meeting scheduled for August 10 and it is hoped that most of its work can be completed at that time.

Dr. Davis stated that the Commission must determine an acceptable criteria where participation in the program is concerned. Thus far, a requirement based on a specific number of hours seems to be the most acceptable.

The Commission has filed with AMA an application for designation of The Medical Society of Virginia as the official accrediting agency in the State. Although there is good reason to believe that the application will be approved, a final decision will not likely be made before October 1.

Dr. Davis went on to say that the Commission must soon make a decision as to whether to recommend the employment of Natresources, Inc., as the State's continuing education coordinator. There was general agreement that the fee originally proposed by Natresources was quite reasonable and that a one-year trial might well be in order.

Dr. Davis then discussed a resolution from the Virginia Academy of Family Physicians requesting that any program adopted by The Medical Society of Virginia accept the AAFP certification program as sufficient evidence of continuing medical education for Academy members. He stated that, in his opinion, the Commission would very likely recommend approval of the Academy's request and the closest possible cooperation with the AAFP program.

Council was advised that every effort will be made to educate the membership concerning the proposed continuing education program prior to the annual meeting in November. All component societies have been contacted and urged to arrange programs on continuing education during the early fall.

It was also learned that on August 10 the Commission will have as its guest the Honorable Donald G. Pendleton of the Virginia General Assembly. Mr. Pendleton is the chief patron of legislation relating continuing education to relicensure and the Commission is anxious to discuss its plans with him.

Dr. Davis advised that no word had as yet been received from the Virginia Regional Medical Program concerning the Society's application for a continuing education grant. It is doubtful if an answer will be received before September 1.

There was some discussion concerning a panel having to do with continuing education and relicensure which will be presented on the last day of the annual meeting in November. It was pointed out that the subject is not really related to the Commission's proposed program on continuing education and should in no way affect the vote of the House of Delegates on November 5. The panel has been planned for the pur-

pose of discussing a subject which might well affect all physicians in the future—particularly since it will quite likely be considered further by the General Assembly in 1975.

Expenses for Delegates

At the present time, the Society's official delegation to AMA meetings is composed of the President, President-Elect, Delegates, Alternates and Executive Vice-President. It was Dr. Martin's recommendation that the delegation be enlarged by including the Immediate Past-President. It was agreed that this particular officer, because of his experience, could make a real contribution during the meetings.

Council was advised that members of the delegation are currently being reimbursed on the basis of actual expenses incurred for transportation, lodging and meals. It was Dr. Martin's further recommendation that the per diem approach be used—a much more equitable method of reimbursement in his opinion. He believed that this method would eliminate many of the uncertainties and judgment decisions on how much to charge the Society under certain conditions.

It was then moved by Dr. Carrington Williams that the following recommendations presented by Dr. Martin be adopted:

1. Delegates will travel by air, at coach rates, by Pullman or first class train fare or automobile at 12¢ per mile.
2. Bus and/or cab fares will be paid along with the cost of getting from airport to hotel and back.
3. Airport parking fees will be reimbursable as would the cost of transportation from home or office to the airport and return.
4. A per diem of $60.00 will be paid—subject to annual review by the President. The per diem allowance will be based on the number of nights necessary to permit comfortable travel and attendance at all scheduled sessions. From the allowance, the individual will pay other costs such as lodging, meals, tips, etc.

The motion was seconded with the understanding that the Immediate Past-President would be included in the official delegation. *The motion was then carried.*

National Association of Regional Medical Programs

The Virginia Regional Medical Program has invited The Medical Society of Virginia to become an institutional member of the National Association of Regional Medical Programs. Council was advised that the National Association affords individuals and associations an opportunity to pool their efforts in the improvement of various programs. Dr. Munoz recommended that the Society accept the invitation and *a motion by Dr. Hill to this effect was seconded and adopted.*

Dr. Martin then discussed a letter from Dr. Perez urging the Society to support certain amendments to H.R. 13995 which would provide for a separate nonprofit agency to develop health resources and services. The letter pointed out that proposed legislation would have the Secretary of HEW establish new health areas without reference to existing health planning, geography, experience, productive accomplishments, etc.

It was agreed that before any letter of support is written, additional advice and guidelines would seem to be in order. Consequently, no action was taken.

Career Film

The Chairman of the Committee on Health Careers had recommended that a current and suitable motion picture having to do with medicine as a career be purchased and presented to the health careers program of the Virginia Council on Health and Medical Care. The cost of such films normally runs between $200-$300.

A motion by Dr. Lucas to *purchase such a film at a cost not to exceed $300.00 was seconded and adopted.*

State Board of Medicine

Council was advised that the President of The Medical Society of Virginia—or his representative—is regularly invited to meet with the State Board of Medicine. Dr. Brown attended the June meeting of the Board and presented a brief report. He expressed appreciation of the Board's hospitality and indicated that it was a most interesting and educational experience. He was most impressed with the manner in which the Board handles its business—especially those of a problem nature. It was agreed that every effort should be made to have the President, or his representative, attend all meetings of the Board. Such liaison is invaluable in establishing and maintaining a sound working relationship.

Auto Leasing

Dr. Martin reported that some state medical societies are sponsoring auto leasing programs

for their members and expressed the feeling that The Medical Society of Virginia should consider a similar action. He was particularly impressed with the program sponsored by the Ohio Medical Association and indicated that it was being well received by the membership. It was brought out that all transactions are between the company and individual physicians and no additional workload would be imposed on the staff. A question was raised concerning servicing of the autos involved and Dr. Martin indicated that this had posed no problem in other areas.

It was agreed that the Society should investigate the feasibility of such a program in Virginia and Dr. Martin indicated that a committee would be appointed for this purpose.

Special Meetings of Council

The Richmond Academy of Medicine had requested that special consideration be given to amending the By-Laws in such manner that special meetings of Council could be called at the request of five Council members. Dr. Wallace, Chairman of the special Committee on Constitution and By-Laws, reported that such a provision had been included in the proposed revision of the By-Laws. He went on to state that his Committee had held a number of meetings during the past several months and had considered all suggestions and recommendations referred to it. It was learned that the present Constitution and By-Laws will be combined into a single set of By-Laws and that Council will have an opportunity to review them at its next session.

A question was raised concerning representation for component societies and it was agreed that this was a problem which must be considered on its own—preferably at a later date.

House of Delegates Action on PSRO

Council learned that the Richmond Academy of Medicine had requested a review of actions taken by the House of Delegates when it met in special session on April 10. The Academy noted that a registered parliamentarian had indicated that the two actions taken by the House were in conflict and, consequently, one negated the other.

Dr. Hagood covered the procedure followed by the House and explained what is involved in the parliamentary procedure of "amendment by substitution". He also explained the division of the amendment by substitution which resulted in the adoption of one portion and the rejection of the other. That portion adopted by the House called upon the Society to support efforts to repeal the PSRO law. Dr. Hagood indicated that, under the provisions of Robert's Rules of Order, the original resolution by Dr. Martin was viable and no conflict was involved. He indicated that each matter had been considered separately and in each instance the minority had made its thoughts known.

It was agreed that much of the dissatisfaction resulted from a belief that the motion introduced by representatives of the First District was actually a substitute motion and that Dr. Martin's motion was, therefore, not viable. It was also agreed that Dr. Hagood had satisfactorily answered the question through his explanation of what is meant by "amendment by substitution".

It was then recommended that Dr. Carrington Williams advise the Richmond Academy of Medicine that the matter was discussed in detail and that, in the opinion of Council, the House acted in a proper and responsible manner. No further action was considered necessary.

Dr. Hotchkiss called Council's attention to that portion of the House action insisting that Virginia physicians maintain control over all data accumulated in the PSRO effort. He stated that such control would seem to be impossible under the present law which specifically grants powers of control to the Secretary of Health, Education & Welfare. Dr. Hotchkiss felt, that for this reason, the action taken by the House should be considered illegal and that the House should be so advised.

Dr. William Eagles

It was called to the attention of Council that Dr. William Eagles, Richmond, has served during the past year as President of Kiwanis International. During this time he has traveled over the world as a good will ambassador for all America.

Everyone agreed that Dr. Eagles should be honored in an appropriate manner and a motion was offered by Dr. Carrington Williams, Jr., directing that a special resolution be drawn. *The motion was seconded and adopted.*

HMO

Dr. Martin recently received a letter from the Medical College of Virginia advising him that an application for assistance in planning a health maintenance organization is being filed in accordance with provisions of PL 93-222. The application is being filed in cooperation with the Richmond Memorial Hospital.

Although the letter had been submitted as a matter of information and did not involve a re-

quest for approval, there was some feeling that the Society should seek as much information on the HMO's situation as possible. There were those who believed that HMOs have many obstacles to overcome.

A motion was offered by Dr. Stark requesting that an appropriate committee look into the HMO situation and report its findings and recommendations to Council. The committee would consult with component medical societies, determine what is going on in various areas of the State and suggest what action, if any, The Medical Society of Virginia should take. *The motion was seconded and adopted.*

Support of Student Medical Organizations

Council was requested once again to give serious consideration to making financial assistance available to student medical organizations. These organizations are particularly anxious to obtain funds which would permit them to send representatives to meetings of AMA and The Medical Society of Virginia.

Mr. Gary Miller, representing the MCV Student Medical Society, advised Council that his group was becoming more and more active in the affairs of organized medicine and would like to send as many representatives as possible to meetings of AMA and The Medical Society of Virginia. He mentioned that the Student Society has sponsored a number of programs during the year and some of its members have attended meetings of various Medical Society of Virginia Committees. It was brought out that the Medical College of Virginia has contributed approximately $1,000 during the past year and needs some help from other sources.

While there was general agreement that the Society should seriously consider providing some financial assistance, it was also agreed that student delegates should take their responsibility seriously. It was suggested that students attending AMA meetings should attend the caucus sessions arranged by the Virginia delegation.

It was then moved by Dr. Hagood that the matter be carried over until the next meeting of Council at which time a specific recommendation concerning the amount of financial assistance needed should be presented. *The motion was seconded and carried.*

Triplicate Prescription Forms

An inquiry was recently received from the Medical Society of the District of Columbia concerning a problem stemming from the prescribing of large quantities of certain stimulants for the purpose of helping lose weight. It was alleged that some of the prescriptions are being sold in an unethical manner and that large sums of money are involved. Many of these drugs apparently find their way into the illicit drug market and are sold for tremendous profits. The District of Columbia is investigating the feasibility of adopting a triplicate form system similar to those in California, New York, etc. It doubts, however, that the system would prove effective unless Virginia and Maryland use something similar.

Mr. Osburn stated that the State Board of Pharmacy believes that the problem can be controlled without resorting to the triplicate form system. There is some feeling that the form would create additional paper work which is for the most part unneeded. According to the Secretary of the Board, we probably need better security where pharmacies are concerned and also where prescription blanks are concerned. The feeling also exists that most of the so-called "street drugs" are of illicit manufacture and the remainder obtained from pharmacy break-ins. The need of a continuing education program concerning the problems of overprescribing and/or prescribing on request was also cited. There were those who felt that the triplicate form system could conceivably pose another threat to confidentiality.

It was then moved by Dr. Weyl that the recommendations proposed by the Secretary of the Board of Pharmacy be endorsed and supported. *The motion was seconded and adopted.*

Examination Form for Adults

The Department of Welfare and Institutions has requested the Society to assist the State Department of Health in developing an examination form for those individuals entering homes for adults. It seems that it is becoming more and more important for each new resident to have available a current medical report for the operator of the home.

Mr. Moore reported that a special examination form for children entering licensed facilities had been designed by the Committee on Child Health and was proving quite valuable. The thought was expressed, however, that such a form should not be restricted to homes for the aged but should be a standard form that could also be used in nursing homes, etc.

Dr. Stark then moved that the matter be referred to an appropriate committee with the request that it work with the State Department of Health in the development of an appropriate form. *The motion was seconded and adopted.*

Council Retreat

A special two-day Council retreat was held at Williamsburg on June 1-2 and Dr. Martin reported on the various comments and suggestions received from those who attended. It was quite evident that just about everyone believed the meeting worthwhile and favored similar sessions in the future.

Dr. Martin went on to say that those who attended the retreat were particularly in favor of establishing a book of policy. Work on such a book is already under way. Also liked was a recommendation that job descriptions for Society officers and Committees be written and that the Advisory Committee of Past-Presidents could make a valuable contribution by helping set up agendas for future "retreats".

The matter of holding some meetings of Council in other parts of the State was also endorsed by many of those at the retreat. It was believed that such meetings would provide excellent opportunities to familiarize our component societies with the workings and administrative processes of organized medicine.

In this connection, it was decided that the next meeting of Council should be on Wednesday, October 16, and that Fredericksburg would be an excellent location. Hope was expressed that the October meeting might make it unnecessary to hold a meeting of Council during the Annual Meeting at Williamsburg.

There was some discussion as to whether the various items considered during the retreat had to be formally considered by Council and it was generally agreed that they did not.

Annual Meetings

Council was requested to make a final decision as to what days of the week annual meetings should be held. For many years, the meetings began on Sunday and ended at noon on Wednesday. Several times in recent years, however, a Thursday through Sunday format has been tried.

It seemed to be the consensus that the Thursday through Sunday format was liked best by the majority of the membership. *A motion by Dr. Stark to use this format in the future was seconded and adopted.*

Registration Fees

A survey was recently conducted in an effort to learn the policy of our neighboring state societies with reference to the charging of registration fees for annual meetings. It was learned that only one society charges such fees—and that one does so only when the meetings are held outside the state.

A motion by Dr. Weyl directing that no registration fees be charged for annual meetings of The Medical Society of Virginia was seconded and adopted.

1979 Annual Meeting

Council was reminded that annual meetings must be scheduled five years in advance if acceptable meeting dates and locations are to be obtained. Consequently, The Homestead had been contacted concerning the 1979 Meeting and the dates of October 25-28 tentatively reserved. It was recalled that Council had decided at an earlier meeting to seriously consider The Homestead as a meeting site.

A motion by Dr. Hill approving the dates of October 25-28 for the 1979 Meeting at The Homestead was seconded and adopted.

Medicare Problems

Several years ago when it became evident that The Medical Society of Virginia would be receiving a number of Medicare related problems, component societies were requested to establish special review committees for the purpose of handling such problem cases in their areas.

It was learned that in recent weeks one component society had requested assistance in the handling of such cases—suggesting that a set of guidelines be given serious consideration. Dr. Alexander expressed the feeling that component societies wanted to fulfill their responsibility but wondered if Medicare problems might not be handled in a more appropriate and effective manner. During the discussion which followed, it was learned that at least one area depends upon the carrier to establish a special committee for this purpose. It was agreed that, although the approach does vary around the State, it seems best for matters of this kind to be handled at the local level if at all possible. It was also agreed that PSRO would not provide the answer to this particular problem.

Dr. Weyl then moved that Council encourage the handling of Medicare problem cases at the local level and that local physicians be likewise encouraged to offer their assistance. *The motion was seconded and adopted.*

Acupuncture

It was suggested that the Society review its previous policy statement on acupuncture as adopted on April 8, 1973. The suggestion had been made as a result of some interest on the part of the General Assembly. In the 1973 statement, Council had pointed out that acupuncture

was being studied by various scientific bodies—including AMA, FDA and NIH. Consequently, it recommended that Blue Shield of Virginia, and other carriers, not pay for such services until the practice of acupuncture has been established as an acceptable mode of medical treatment rather than the experimental procedure it was considered at that time. Council also put the Society on record as recommending that the use of acupuncture be confined to established investigative medical centers where controlled experiments could be carried out.

During the ensuing discussion, it was mentioned that the AMA Committee on Quackery feels that acupuncture is a type of treatment which lends itself very easily to the abuse of patients.

It was then moved by Dr. Davis that Council reaffirm its policy statement of April 8, 1973. *The motion was seconded and adopted.*

First Aid

The Committee on Public Relations recommended to Council that a first aid flier—similar to that currently being used in North Carolina—be printed and distributed to all interested groups and individuals. Cost of the project was estimated at approximately $250.00 for 25,000 copies.

Mr. Osburn reported that the flier had been unusually well received in North Carolina and that the North Carolina Medical Society considered it one of its most successful projects.

There was, however, some question concerning the medical content of the flier—particularly with reference to heat exhaustion and sunstroke. It was agreed that, while the flier had much to recommend it, it should be updated for accuracy before accepted as a PR project.

A motion was then introduced by Dr. Alexander approving the idea but recommending that the flier be studied by an appropriate committee in order that accuracy might be assured. The committee's recommended format would then be considered at a later meeting of Council. *The motion was seconded and adopted.*

High Blood Pressure Program

The Committee on Pharmacy has expressed its concern over a program which has been proposed by the Department of Pharmacy of the Medical College of Virginia. It is known as the "Virginia Pharmacists' High Blood Pressure Program" and the Committee believes that it could well be an infringement on the practice of medicine. It was learned that the Lynchburg Academy of Medicine had also expressed its concern in opposition to the program.

The program was reported to have a number of objectives. One was concerned with public information and the distribution of hypertension literature. Another involved patient education and would have pharmacists provide hypertensive patients with a full description of the disease and its treatment. A third had to do with therapeutic response monitoring and would have the pharmacist record a patient's blood pressure on each visit to the pharmacy. This would be for the purpose of detecting patients with poor blood pressure control or in an accelerated phase of blood pressure elevation. Pharmacists would also be trained to provide consultation and reinforce physicians' instructions on such matters as low sodium diets, weight reduction diets, smoking cessation, etc.

Following a period of discussion during which it was pointed out that the Virginia Heart Association already has an excellent program in operation, it was moved by Dr. Hagood that Dr. James McKinney, Director of the proposed program, be invited to attend the next meeting of Council and explain his proposal in more detail. Although there was some question as to what might be accomplished, *the motion was seconded and adopted.*

Bank Cards

Dr. Weyl indicated that the bank card situation is causing some problems in his area. It was recalled that Council had, several years ago, approved the use of bank cards as long as they were used according to certain guidelines established by the American Medical Association. It was agreed that the matter might well be reviewed at the next meeting on October 16.

Travel Program

Dr. Hill stated that he had received a number of proposals for the Society's 1975 travel program. The proposals ranged from seven to fourteen days and featured both air and sea transportation. It was decided that the matter should be considered in more detail on October 16.

There being no further business, the meeting was adjourned.

ROBERT I. HOWARD, *Secretary*

APPROVED:
JOHN A. MARTIN, M.D., *President*

Woman's Auxiliary . . . .

Walter Reed Birthplace

The modest cottage which was the birthplace of Dr. Walter Reed, conqueror of yellow fever, is located at Belroi, four miles west of Gloucester Court House. It is a quaint two-room cottage with a finished attic which originally was a dependent of Belroi Plantation. The cottage is very similar in design to the Williamsburg kitchens. It was here that Walter Reed was born on September 13, 1851, the son of a Methodist minister, the Rev. Lemuel Sutton Reed and his wife, Pharaba White Reed.

Walter Reed was born in this cottage by accident as the parsonage burned several days before his birth, and there were no other available accommodations.

The Medical Society of Virginia purchased the Birthplace and one acre of land in 1926 for the sum of $1,000. (Gloucester County Deed Book 52, p. 41, November 30, 1926.) Restoration of the Birthplace was immediately started and the formal dedication took place at Belroi, Saturday, October 15, 1927.

The Walter Reed Memorial Commission of The Medical Society of Virginia maintained the Birthplace until 1968, when it was deeded to the Association for the Preservation of Virginia Antiquities.

The Medical Society of Virginia had enclosed the grounds with a split-rail fence, and the Garden Club of Gloucester had landscaped the grounds with planting in keeping with the period of the Birthplace.

In 1967 the Woman's Auxiliary of The Medical Society of Virginia with Mrs. Daniel Anderson, President, voted to furnish the Birthplace as a project of the Auxiliary. Mrs. Raymond S. Brown of Gloucester was appointed Chairman of this project. Although, The Medical Society of Virginia deeded the birthplace to the Association for the Preservation of Virginia Antiquities, the Auxiliary has continued with the project of furnishing Walter Reed Birthplace.

The Auxiliary took this project very seriously. Members at first gave small articles such as a complete leather bound set (14 volumes) of Americana Encyclopedia, dated 1831; religious and other leather bound books; two white china urinals (male and female) and a china bedpan; old clothing and linens. The Auxiliary gave $200 to purchase a bed suitable for the Birthplace. Wrought-iron cooking utensils and fireplace items were donated. In December 1970, Dr. and Mrs. William F. Bernart of Nassawadox, gave six original stencilled, perfect condition, Hitchcock chairs. This gift is probably one of the most valuable single gifts the Auxiliary has received for the Birthplace. Also, a small leather traveler's trunk, and through money donations by the Auxiliary a Hepplewhite drop-leaf walnut table, late 18th or early 19th century was purchased, and a Sheraton black walnut chest of drawers c. 1800-1830. The Sheraton chest of drawers is the latest gift of the Auxiliary to the Birthplace. Through donations from the Richmond Academy of Medicine's Auxiliary brass candlesticks and an old coverlet were purchased. Incidentally, I paid $26 for the coverlet, and it has been appraised at $500. All furniture and accessories are prior to 1851, the year of Walter Reed's birth.

One of the highlights of 1972 was the visit of the Woman's Auxiliary of The Medical Society of Virginia to the Birthplace. The Joseph Bryan Branch of the Association for the Preservation of Virginia Antiquities, who is responsible for the maintenance and furnishings of Walter Reed Birthplace, was hostess for the occasion. A side trip to "Toddsbury", a home considered to be the "jewel of Tidewater" was an added attraction where a lovely tea was served.

In April 1973 the Birthplace was placed on the register of Virginia Historic Landmarks.

In October 1973 it was named to the National Register of Historic Places.

This year a parcel of land adjoining the Birthplace was purchased by the Joseph Bryan Branch of the Association for the Preservation of Virginia Antiquities for future protection. Exterior improvements have been made by installing a parking lot, walkway and additional landscaping.

Unfortunately, the Birthplace is not opened to the public except during Historic Garden Week and on special occasions. However, if anyone is in Gloucester and wishes to visit the Birthplace, please let me know, and I will be glad to take you there.

The Medical Society of Virginia contributes $500 a year towards the maintenance of Walter Reed Birthplace. Nowadays, this amount just about maintains the grounds.

The Medical Society of Virginia and the Woman's Auxiliary to The Medical Society of Virginia can be proud of the part they have had in contributing to the restoration, furnishing and maintenance of the Birthplace of one of our greatest doctors, Walter Reed.

Mrs. Raymond S. Brown
Chairman, Walter Reed Birthplace

Southern Medical Association.

The Local Committee on Arrangements for the Golden Anniversary Meeting of the Woman's Auxiliary to Southern Medical Association, Atlanta, November 17-20, has scheduled the program of "Yesterday, Today and Tomorrow" so that both doctors and wives may not only attend their meetings, but also join in the fun and entertainment. In addition to daily activities, provisions have been made for those who wish to join a group for dinner on Monday and Tuesday evenings.

Special Planned Activities

November 18—11:30-4:30. "Yesterday"—Relive the past in the colorful setting of Six Flags over Georgia. Antique cars will meet you in the parking lot to take you to the Crystal Pistol for an old-fashioned buffet and professional show by outstanding young singers, dancers and entertainers. Tickets: $10.00

November 19—1:30-5:30. "Today"—Swing into the present with a tour of unique Atlanta homes, followed by a tea at the Academy of Medicine, where Tara's Waterford chandelier of Gone with the Wind movie fame greets you in the entrance hall. Tickets for Tour and Tea: $6.50

November 20—12:00 noon. "Tomorrow"—Face the future in a celebration of Tomorrow with a Doctor's Day Awards luncheon, Hyatt Regency Hotel, Condor Room. Tickets: $8.00

Tickets for all events may be purchased at the auxiliary registration desk in the lower lobby Hyatt Regency, Atlanta.

Please circle the dates on your calendar and meet me in Atlanta. Let us make this our very best year for "Southern". Atlanta will be there to greet you.

See you, Opal

Mrs. W. Nash Thompson, *President*

Editorial....

Modern Radiology of the Lung

WE WOULD BE PROFESSIONALLY POOR, indeed, if we thought and did the same as a quarter century ago. My radiologic reports dealing with the lung have changed even more than those of any other organ in this interval. While this change stems from many influences, no influence has been more than that of Felson[1] and Heitzman[2], who have put the capstone of their own fine work upon the work of their predecessors in the natural evolution of learning, to the benefit of all of us.

In our residency days, a pulmonary shadow was a pneumonia because it "looked like a pneumonia". Not so today.

The first step in the rigorous approach to the roentgenogram of the chest is a knowledge of its anatomy. There is a connective tissue scaffolding continuous with the connective tissue of the mediastinum, through which course the air, blood and lymphatic ducts, and in which are embedded the alveoli to provide for gaseous exchange. A homunculus, so inclined, might walk from the mediastinum along the major ducts, right to the floor of the alveolus. If he were further inclined, he might kick his foot into the air-space of the alveolus, or his other foot into the pulmonary (or bronchial) capillary.

The most important part of this concept of connective tissue scaffolding to us radiologists, as practicing gross anatomists, is the secondary lobule, radiologically silent when the lung is normal, but generously cooperative to become visualized when the lung is abnormal. The pleural boundaries of these lobules are commonly seen at autopsy as a network of fine lines because of the deposition of the particulate matter after a life-time of dirty air. These secondary lobules are irregularly constructed, roughly polyhedral boxes of connective tissue, roughly one or two centimeters in diameter, supplied centrally by a few arterioles and a few terminal bronchioles with the terminal air-spaces that these subtend. A continuous connective tissue scaffold supports the whole structure, including the central bronchioles and arterioles, and the peripheral veins and lymphatics in the box-like covering. Fibrous intralobular septa connect the central and peripheral structures, and support the intervening terminal air-spaces with their capillary network.

The secondary lobule is so important to the radiologist because most significant pulmonary infection and chronic obstructive lung disease start here. It can be host even to cancer, the bronchiolo-alveolar adenocarcinoma. It is the fundamental unit of infarction, and it permits elucidation of infarction's many faces.

Such a concept of the lung permits broad generalization of two types of diseases: those that involve the air-space, and those that involve the interstitium. Differentiation is hardly ever absolute pathologically or even radiologically, but the attempt at differentiation is most important radio-diagnostically even though the pitfalls are many. If we organize the air-space and interstitial diseases into acute and chronic clinical types, and into rare and common subgroups, it is at once apparent that the couple of hundred causes

for the "roundish" shadow in the lungs of the "Aunt Minnie days" are brought to manageable proportions. Not that we will always be right in the specific diagnosis, but it will be error dependent upon limitations of the method, rather than error dependent upon ignorance.

Relatively pure interstitial disease is represented by the early stages of heart failure, yes, even before there are clinical signs or symptoms, when the blood is diverted from the pulmonary bases to the apices. This manifestation of pulmonary venous hypertension is the radiologic cry of the anguished heart for help, just as the gallop rhythm is the clinical cry. Fluid accumulates in the connective tissue scaffolding. The septa of the secondary lobules become visible in the outer bases as short horizontal lines extending to the pleura, and as longer, more irregular and diagonally disposed lines in the upper lobes (Kerley's B and A lines). When the lymphatics can no longer handle the increased fluid load, edema passes into the alveoli; the clinical picture is aggravated and the air-space component of pulmonary edema becomes visible on the roentgenogram.

Many other diseases hit the interstitium hard, but some of these might have a preliminary exudative air-space phase, radiologically detectable or not: the collagenoses (scleroderma, lupus, rheumatoid lung), the organic and inorganic dust diseases, granulomatous diseases such as miliary tuberculosis and sarcoid, histiocytoses, metastases, Hodgkin's disease, chronic idiopathic interstitial pneumonitis (including the old Hamman-Rich syndrome, possibly some of these cases being the end result of a process originally viral), and drug reactions. It should be emphasized that the end-stage of many of these interstitial diseases (excluding the malignant ones) cannot be differentiated, thus recalling the end-stage kidney that might give us no clue of what went before. Old tuberculosis, old sarcoid, old histiocytosis X, old silicosis, and old bird-fancier's disease all may mimic each other.

The air-space group is commonly impure, often hiding an interstitial component in the more dramatic big, fluffy, air-space opacity. The rare alveolar proteinosis is probably the purest example of this group. The current radiologist considers the possibilities of what might be filling the air-space, and decides the most likely one in view of the clinical picture: pure edema from heart failure, hemorrhagic edema fluid from an intense viral infection, irritative edema fluid from any noxious agent in the alveolus (acid gastric contents, milk, high carbohydrate formula, irritating gases, fresh or salt-water, hydrocarbons, fat embolus, and drug sensitivity), frankly infected fluid (pneumonia), highly proteinaceous material with hyaline membrane (respiratory distress syndrome), blood (post-traumatic, infarction, early phases of idiopathic pulmonary hemosiderosis and of Goodpasture's syndrome), and even tumor (bronchioloalveolar carcinoma). It is paramount for the clinician to fully understand that the radiologist cannot differentiate any one of these from the others purely on the air-space shadow, and must depend on other factors, such as condition of the heart and evolution of the shadow. But most important, he must depend on the help the clinician gives him. To the radiologist there is no difference between the air-space shadow of an overwhelming influenza and pulmonary edema from heart failure, or none between pneumonitis and infarct.

The pneumococcus "lobar pneumonia" of yesteryear is unusual today: the organism lodges in a terminal air-space, elicits an inflammatory edema in which the organism proliferates, and the process spreads from alveolus to alveolus through the naturally occurring pores of Kohn until most or the entire lobe is involved, respecting only the interlobar fissures.

Today, the lobular infectious process is much more common, and is called either bronchopneumonia, lobular pneumonia, or patchy pneumonia by the radiologist. The causative organisms, commonly Staphylococcus, Gram negative rods, Streptococcus, and others, are more bronchiolar-oriented, involving the bronchioles and surrounding alveoli (aided by transmission through the canals of Lambert) of the secondary lobule. Multiple lobules are involved helter-skelter, either by extension or by the primary bronchiolar process. Intervening lobules might be spared. According to the number and distribution of involved secondary lobules, we might have a sublobular, lobular, subsegmental, segmental, or even a lobar process. So, our lobar pneumonia of today is usually a confluent lobular pneumonia involving most of the lobe.

My thanks to Dr. Benjamin Felson of Cincinnati, and to Dr. E. Robert Heitzman, of Syracuse, for their suggestions in the preparation of this Editorial.

Christian V. Cimmino, M.D.

References

1. Felson, B. Chest Roentgenology. W.B. Saunders Company, Philadelphia, 1973.
2. Heitzman, E. R. The Lung, Radiologic-Pathologic Correlations. The C.V. Mosby Company, Saint Louis, 1973.

Watergate Aftermaths

THE RESIGNATION of President Nixon will have many repercussions and some doubtless will affect medicine. A news item from Washington on August 22, stated that despite President Ford's presidential address ten days earlier, in which he had included a request for Congress "to write a good health bill . . . before this Congress adjourns", there appears little possibility of any action at this time. Chairman Wilbur D. Mills, of the House Ways and Means Committee, said the panel would have to "lay aside" health insurance until after it returns on September 11, and a tax reform bill then would have first priority.

The majority of congressmen interviewed stated that there was little likelihood of health insurance legislation this year. The new president, according to Chairman Mills, has not had an opportunity to look into the various health proposals, so there has been little thought given to health legislation by the new administration. Perhaps we are fortunate at that, for President Ford's unexpected leftish leanings since he took office may give us more socialized medicine than we bargained for when he took office.

A second, less significant and somewhat oblique by-product of the presidential resignation may be found in Washington newsman Carl T. Rowan's column which appears, for no evident reason, several times a week in a Richmond newspaper. For the past two years his column has dealt largely

with President Nixon, and his strictures have surpassed anything that has appeared in the *Washington Post* during the recent unpleasantness. Now, after a momentary pause, in order doubtless to regroup, he appears to have chosen the pharmaceutical companies and American medicine as his new targets.

According to journalist Rowan, "when drug companies are pumping out 20,000 versions of pills and potions which supposedly cure just about anything, it is literally true that the medicine you take can be far more lethal than the ailment you seek to erase." Rowan believes "if you take the wrong drug you could suddenly develop cataracts, find your hair falling out, develop severe skin diseases, or have withdrawal symptoms that are extremely severe, even fatal." Rowan pointed out that two powerful organizations supposedly exist for the sole purpose of protecting the public. These defenders, according to our critic, should be the Food and Drug Administration and the physicians of America who traditionally have stood between their patients and evil medical influences of every sort. However, Rowan sadly states neither of these safeguards can now be "relied upon wholly."

Scientists in the FDA, if we can believe our columnist, are harassed and intimidated by sinister forces that may transfer the more zealous scientists away from the study of the very drugs they feel should be barred from sale. We are further told that FDA scientists have given testimony before the Senate Health and Administration Practice subcommittee that records have been altered in order to permit a questionable drug to appear on the market. Rowan states, "In short, the testimony of the scientists suggests that FDA leadership has been more interested in staying in favor with the pill makers than in protecting the people." This new and novel role of FDA, if true, is indeed a switch from all we have been aware of since the days of Senator Kefauver.

To further disturb Mr. Rowan, who earlier may have felt reasonably well protected by his physician, now has been completely disillusioned by an article in the July issue of *New Times* magazine, authored by Ms. Amanda Spake. Amanda tells us, "The fiercely competitive drug manufacturers are buying off doctors and that physicians are becoming medical frontmen for the big-time pushers in America today, the pharmaceutical houses."

According to Rowan, Ms. Spake wrote "Last year the industry spent . . . (in various enumerated ways) . . . an estimated $5,000 on each of the nation's 200,000 (sic) doctors, all in the hope of convincing the physicians to prescribe drugs, and more of them." These physicians, in turn, averaged "$30,000 worth of prescription drugs per doctor." These figures boggle the mind and almost tempt the writer to come out of retirement in order to participate in what Ms. Spake calls "prescription payola".

But there is nearly always a silver lining if a sufficiently diligent search is made and a NBC survey announced by columnist Kevin P. Phillips, indicates Senator Edward Kennedy, in a 1976 presidential trial heat, polled only 30 percent of the votes and Teddy "may well be another casualty of post Watergate morality." We devoutly hope our informant is correct, for if it is so, it couldn't have happened to a nicer person.

H. J. W.

News . . . .

Calendar of Events

Present Day Medical-Moral Questions in the Fields of Human Reproduction and Bioethics—a Symposium sponsored by Chaplains of the Naval Regional Medical Center, The Medical Society of Virginia and American Medical Association—Naval Hospital—Portsmouth—October 24, 1974.

Virginia Association for Mental Health—Boar's Head Inn—Charlottesville—November 1-2, 1974.

The Medical Society of Virginia—Annual Meeting—Williamsburg—November 3-6, 1974.

Virginia Hospital Association—The Homestead—Hot Springs—November 7-8, 1974.

American Association for Clinical Immunology and Allergy—Annual Meeting—Pier 66—Ft. Lauderdale, Florida—November 21-24, 1974.

Virginia State Department of Mental Health and Mental Retardation—Williamsburg Conference Center—Williamsburg—November 25-26, 1974.

AMA Clinical Meeting—Portland, Oregon—November 30-December 4, 1974.

Air Pollution Medical Research Conference—Sponsored by AMA—Sheraton Palace Hotel—San Francisco—December 5-6, 1974.

Core Curriculum: Clinico-Pathologic Correlations in Cardiovascular Disease—Continuing Medical Education Program sponsored by American College of Cardiology—December 5-8, 1974—Complete details available from American College of Cardiology, 9650 Rockville Pike, Bethesda, Maryland 20014.

Problems of Cortical Function—Sponsored by Division of Pediatric Neurology of the University of Virginia, Medical College of Virginia and King's Daughters' Hospital—Cascades Convention Center—Williamsburg—December 6-8, 1974.

Alton D. Brashear Postgraduate Course in Head and Neck Anatomy—Postgraduate course sponsored by Medical College of Virginia—Approved for 40 elective hours by American Academy of Family Physicians and Academy of General Dentistry—Department of Anatomy—Medical College of Virginia—Richmond—January 20-23, 1975.

Virginia Lung Association—Williamsburg Lodge—Williamsburg—February 17-21, 1975.

National Conference on Rural Health—Sponsored by American Medical Association—Hotel Roanoke—Roanoke—March 20-21, 1975.

Virginia Heart Association—Annual Meeting and Scientific Sessions—New Cavalier—Virginia Beach—May 12-13, 1975.

• • • • • • • •

The Medical Society of Virginia maintains a registry of medical meetings and programs of interest to Virginia physicians. You can help by keeping us advised of any meetings scheduled in your area. This will not only help others avoid conflicts but also provide helpful information on opportunities for continuing education.

New Members.

The following members were received into The Medical Society of Virginia during the month of July:

Thomas Aceto, Jr., M.D., Charlottesville
Jesse James Bates, M.D., South Boston
Rodney Lynn Belcher, M.D., Arlington
Aurelius W. Brantley, M.D., Franklin
John White Campbell, M.D., Brookneal
Tran Trong Cuong, M.D., Springfield
William Taylor Dabney, III, M.D., Richmond
Nimai Chandra Datta, M.D., Culpeper
Richard Thomas Edwards, M.D., Roanoke
Esmail Ethem Ering, M.D., Manassas
Herschel Leonard Estep, M.D., Richmond
Robert Dickenson Gilmer, M.D., Tazewell
Edward Marvin Gotlieb, M.D., Richmond
Jaquelin Smith Gotlieb, M.D., Richmond
Julio Benjamin Gutierrez, M.D., Falls Church
Bobby Glenn Holden, M.D., Petersburg
William A. Houck, Jr., M.D., Winchester
Byron Stuart Hurtwitz, M.D., Bethesda, Maryland
Rodrigo T. Isada, M.D., Cedar Bluff
Robert Alvin Israely, M.D., Washington, D. C.
George Watson James, III, M.D., Richmond
Elizabeth W. Johnston, M.D., McLean
John Kattwinkel, M.D., Charlottesville
Richard W. Kesler, M.D., Charlottesville
Kazuo K. Kimura, M.D., Vienna
L. Jerome Krovetz, M.D., Charlottesville
Edward Lewis Lilly, M.D., Norfolk
Richard Rowland Lower, M.D., Richmond
Eugene Culver Lozner, M.D., Washington, D. C.
Murray Culbertson Miller, M.D., Virginia Beach
Benny Carroll Mullins, M.D., Clintwood
Walter J. O'Donohue, Jr., M.D., Richmond
Walter Paslawski, M.D., Fredericksburg
Wesley Harold Peterson, M.D., Winchester
William C. Rees, M.D., Reston
Lois T. Sawyer, M.D., Hampton
Robert Bradley Scott, M.D., Richmond
Andrew Alfred Slemp, Jr., M.D., Roanoke
Simon Solano, M.D., Arlington
Abu M. Abdur R. Thanadar, M.D., Portsmouth
Eduardo T. Tolosa, M.D., Tazewell

Norfolk County Medical Society.

Dr. Maurice M. Miller is president of this Society for 1974-5 and Dr. Robert A. Morton is president-elect. Dr. Russell D. Evett is vice-president; Dr. Richard C. Reed, secretary, and Dr. Quincy A. Ayscue, treasurer.

Portsmouth Academy of Medicine.

Dr. H. D. Cox is president of the Academy for 1974-1975; Dr. E. S. Sayegh, president-elect; Dr. H. J. Breit, secretary, and Dr. T. H. Webb, treasurer.

Dr. Owen Gwathmey,

Richmond, has been reappointed by Governor Godwin as a member of the Board of Visitors of Virginia Commonwealth University.

Dr. Donald T. Faulkner.

Governor Godwin has appointed Dr. Faulkner, Norfolk, as a member of the Advisory Board on the Aging.

Dr. James G. Snead,

Roanoke, has been appointed by Governor Godwin to the Virginia Comprehensive Health Planning Council.

Dr. Lazar John Greenfield

Has become chairman of the Department of Surgery of the Medical College of Virginia. He assumed the chairmanship on September 1, succeeding Dr. David M. Hume who died in an airplane crash in May of 1973. Dr. Greenfield was formerly professor of surgery at the University of Oklahoma Health Sciences Center and Chief of Surgical Services at the Veterans Administration Hospital in Oklahoma City.

Dr. Edward W. Hook,

Charlottesville, has been elected Governor of Virginia for the American College of Physicians. He will assume his duties in 1975. Dr. Hook is chairman of the Department of Medicine of the University of Virginia.

Dr. Ake E. Mattsson,

Professor of psychiatry and pediatrics and director of child and adolescent services for the department of psychiatry at the University of Virginia, has been named to receive a Fulbright-Hays award for research in child psychiatry in Sweden in 1975. He will work at the Karolinska Institute in Stockholm for six months beginning in January.

Staff Physician Wanted.

One Admitting Physician for night tour; one physician to work in the Ambulatory Care Service of a large active GM&S hospital, affiliated with the University of Virginia Medical School. Hospital adjoins the city of Roanoke on a 266-acre site in the beautiful Roanoke Valley between the Alleghany and Blue Ridge Mountains, with a valley population of approximately 250,000. Requires permanent visa or U. S. citizenship. Salary dependent upon qualifications. Contact Chief of Staff, VA Hospital, Salem, Virginia 24153. Telephone 703-344-2021. An Equal Opportunity Employer. (*Adv.*)

Eli Lilly and Company

Is sponsoring prime-time television programs for the first time in its history with "Sandburg's Lincoln", a series of six one-hour specials based on Carl Sandburg's Pulitzer Prize winning biography of Abraham Lincoln. The programs will be telecast over the NBC Television Network, and will be presented by Lilly over a three year period in connection with the Bicentennial Celebration.

Postgraduate Course in Head and Neck Anatomy

A four-day course entitled "The Alton D. Brashear Postgraduate Course in Head and Neck Anatomy" will be held at the Medical College of Virginia, Department of Anatomy, January 20-23, 1975.

Fresh specimens (unpreserved) whenever possible are used in the dissections and individual surgical approaches are welcomed. Lectures and demonstrations will augment the laboratory work. The course is approved for 40 elective hours by the American Academy of General Practice and Academy of General Dentistry.

Further information may be obtained from Dr. Hugo R. Seibel, Department of Anatomy, Medical College of Virginia, Richmond, Virginia 23298.

The American Rheumatism Association,

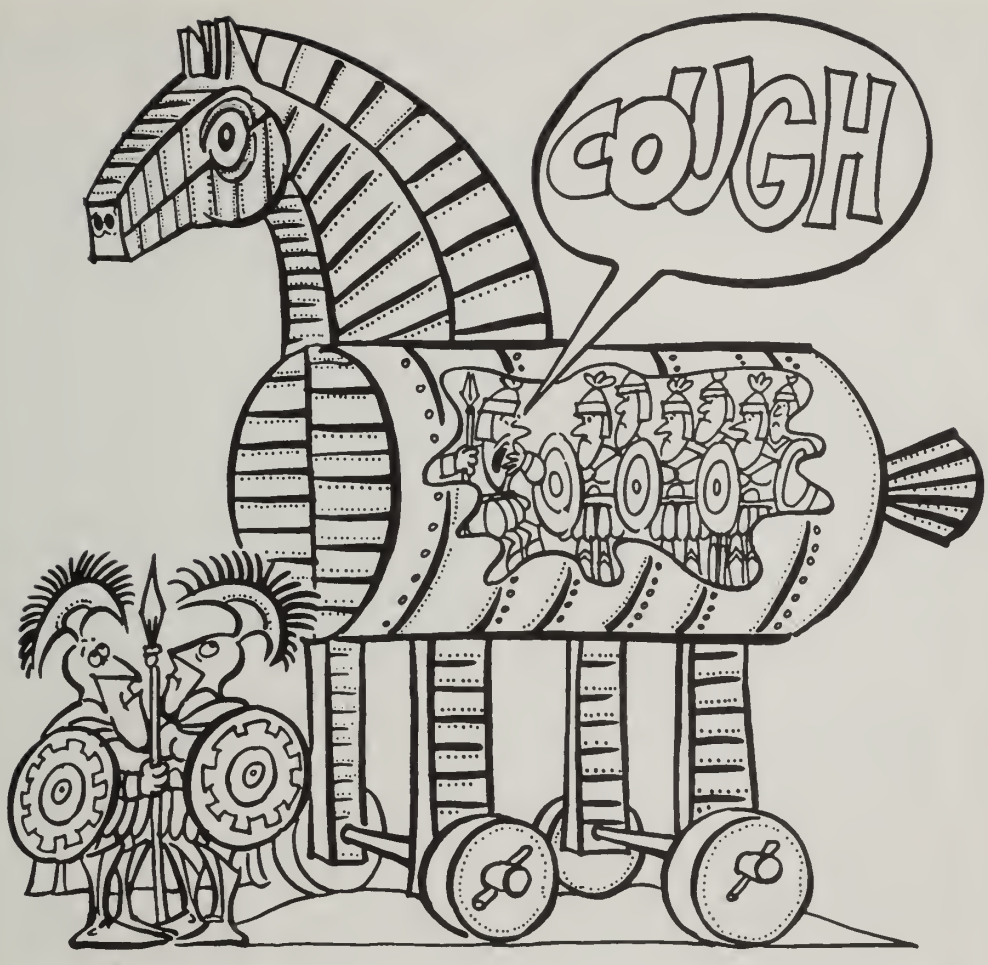
Southeastern Region, will meet in Atlanta, at the Regency Hyatt Hotel, December 13-14. Two symposia are planned: one on Scleroderma under the chairmanship of Dr. Gerald Rodnan, Pittsburgh; and the other on Gout under the general chairmanship of Dr. Jim Wyngaarden, Duke University. There will also be original papers presented.

Dr. John S. Davis, IV, Department of Medicine, University of Virginia, is chairman of the Southeastern Regional Meeting.

Obituary . . . .

Dr. John Huit Dellinger,

Norton, died July 8 at the age of sixty-three having been in ill health for some time. He was a graduate of the Louisiana State University Medical School in 1938. Dr. Dellinger practiced in Pennington Gap for fourteen years and in Norton for twenty-two years. He was a past president of the Wise County



When a cough spoils your patient's day...

Triaminic® Expectorant

Each teaspoonful (5 ml.) contains:
Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg.; pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.); glyceryl guaiacolate, 100 mg.; alcohol, 5%.

Triaminic® Expectorant with Codeine ©V

Each teaspoonful (5 ml.) contains:
Codeine phosphate, 10 mg. (Warning: May be habit forming); Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg.; pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.); glyceryl guaiacolate, 100 mg.; alcohol, 5%.

Triaminic Expectorant with Codeine is a Schedule V controlled substance.

The Adult Expectorant that is great for kids, too.

Dorsey Laboratories/Division of Sandoz-Wander, Inc./Lincoln, Nebraska 68501

BS–SB

Medical Society and had been a member of The Medical Society of Virginia for thirty-two years. Dr. Dellinger was a member of the All Saints Episcopal Church of Norton where he served on the Vestry and was treasurer for many years. He was on the staffs of St. Mary's, Norton Community and Park Avenue Hospitals and served as chief of medicine formerly in all three institutions.

His wife, three daughters and five grandchildren survive him.

Dr. Victor Page Owen,

Jarratt, died July 13. He was fifty-eight years of age and graduated from the Medical College of Virginia in 1942. For the past thirteen years, Dr. Owen had served as director and clinician of the Virginia Public Health Service. He was a past member of the planning commission of the town of Jarratt. During World War II, Dr. Owen served as a lieutenant in the Navy. He had been a member of The Medical Society of Virginia since 1951.

His wife, a daughter and three sons survive.

Dr. Caldwell Jackson Stuart,

San Antonio, Texas, died June 19, at the age of seventy-eight. He was a graduate of the School of Medicine, University of Virginia, in 1923. Dr. Stuart was located in Petersburg before moving to San Antonio. He was a member of The Medical Society of Virginia, having joined in 1956, and was a member of the Fifty Year Club.

Dr. Hawthorne.

Dr. Allen Tupper Hawthorne was born in Nelson County, Virginia, on May 11, 1893. He died after a short illness in Winchester, where he had practiced for fifty years, on March 19, 1974.

Dr. Hawthorne's preliminary education was obtained from the College of Charleston, South Carolina. Following this, he matriculated in the School of Medicine, University of Virginia in Charlottesville. He graduated at the University in 1918 and followed this with a two year rotating internship at the University of Virginia Hospital.

Following this internship, he accepted a residency in Eye, Ear, Nose and Throat for two years at the Presbyterian Eye, Ear and Throat Hospital in Baltimore. Upon the completion of his residency he began practice in Ophthalmology and Oto-Laryngology in Harrisonburg where he remained for almost two years. In 1924 he began the practice of his specialties in Winchester. He became a member of the Staff of the Winchester Memorial Hospital soon after his arrival in Winchester and was a member of that staff until his death.

Dr. Hawthorne was certified by the American Board of Oto-Laryngology in 1937 and was affiliated with the following Societies: The Medical Society of Virginia, American Medical Association, Medical Society of Northern Virginia, Southern Medical Association, Virginia Society of Ophthalmology and Oto-Laryngology, the American Academy of Ophthalmology and Oto-Laryngology and was a member of the Raven Society of the University of Virginia.

Interests other than medical were Board of the First Baptist Church of Winchester, past member of the City Council of Winchester, and Board of Directors of Shenandoah Valley National Bank. He was an avid golfer and was a past president of the Virginia Seniors Golf Association. He also enjoyed hunting and bowling.

Tupper Hawthorne was well known and actually famous throughout the Commonwealth for his ability as a toastmaster and raconteur.

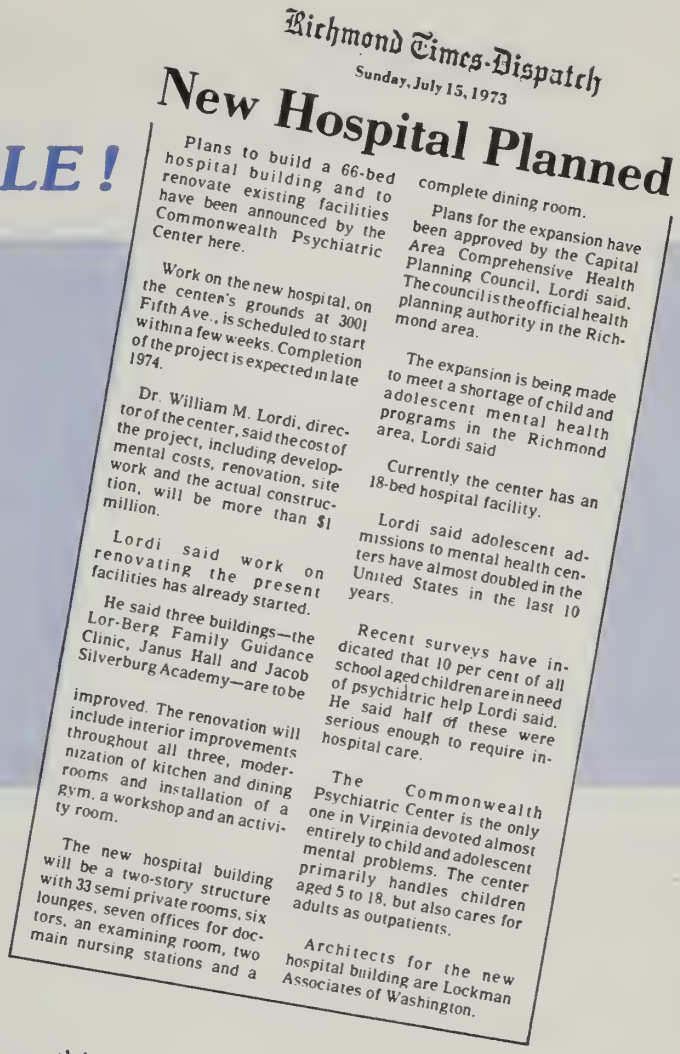
Dr. Hawthorne is survived by his wife and two daughters. He is also survived by two sisters, six grandchildren and one great grandchild.

Deepest sympathy is extended to his family.

William P. McGuire, M.D.

NOW AVAILABLE !

Exclusively For Children and Adolescents-- A new, completely modern 66-bed hospital is now open for patient referrals



Richmond Times-Dispatch

Sunday, July 15, 1973

New Hospital Planned

Plans to build a 66-bed hospital building and to renovate existing facilities have been announced by the Commonwealth Psychiatric Center here.

Work on the new hospital, on the center's grounds at 3001 Fifth Ave., is scheduled to start within a few weeks. Completion of the project is expected in late 1974.

Dr. William M. Lordi, director of the center, said the cost of the project, including developmental costs, renovation, site work and the actual construction, will be more than $1 million.

Lordi said work on renovating the present facilities has already started.

He said three buildings—the Lor-Berg Family Guidance Clinic, Janus Hall and Jacob Silverburg Academy—are to be improved. The renovation will include interior improvements throughout all three, modernization of kitchen and dining rooms and installation of a gym, a workshop and an activity room.

The new hospital building will be a two-story structure with 33 semi private rooms, six lounges, seven offices for doctors, an examining room, two main nursing stations and a complete dining room.

Plans for the expansion have been approved by the Capital Area Comprehensive Health Planning Council, Lordi said. The council is the official health planning authority in the Richmond area.

The expansion is being made to meet a shortage of child and adolescent mental health programs in the Richmond area, Lordi said

Currently the center has an 18-bed hospital facility.

Lordi said adolescent admissions to mental health centers have almost doubled in the United States in the last 10 years.

Recent surveys have indicated that 10 per cent of all school aged children are in need of psychiatric help Lordi said. He said half of these were serious enough to require hospital care.

The Commonwealth Psychiatric Center is the only one in Virginia devoted almost entirely to child and adolescent mental problems. The center primarily handles children aged 5 to 18, but also cares for adults as outpatients.

Architects for the new hospital building are Lockman Associates of Washington.

■ Work has just been completed on this new hospital, specifically designed for the treatment of the emotionally disturbed. In addition to the hospital itself, the Center is moving ahead with construction of a gymnasium and swimming pool to provide its patients with the very best of private institutional facilities in the Mid-Atlantic Region.

■ Four full-time child psychiatrists and a staff of experienced psychologists, psychiatric nurses, psychiatric social workers, therapists and other specialists offer a wide range of treatment modalities. A fully-accredited school program features small classes structured to meet the needs of the individual.

COMMONWEALTH PSYCHIATRIC CENTER

3001 Fifth Avenue
Richmond, Virginia 23222

Telephone (804) 329-4392

Brochure on Request

BAYBERRY PSYCHIATRIC HOSPITAL

HAMPTON, VIRGINIA

Bayberry is a 125 bed private hospital which offers a wide range of inpatient, day care, outpatient, and consultative services, as well as treatment programs for adolescents, children, and alcoholics.

TREATMENT

After a comprehensive medical and psychiatric evaluation, each patient receives an individualized treatment program and schedule of activity therapies. Treatment may include individual therapy, group therapy, psychodrama, chemotherapy, electroconvulsive or insulin treatment.

EDUCATION

A regular school curriculum is followed and academic credit is given. The Hampton Roads Reading Center is located within the hospital and provides special instruction for children with dyslexia and other learning problems.

REHABILITATION

Rehabilitation services include individual counseling, special education, and job training programs.

ACCREDITATION

Accredited by the Joint Commission on Accreditation of Hospitals, approved for Medicare, member of the American Hospital Association, and licensed by the State Department of Hospitals and Mental Hygiene.

WENDELL J. PILE, M.D.
Medical Director

HOWARD L. COX, M.D. BASIL E. ROEBUCK, M.D. JONATHAN G. SOLOMON, M.D., LTD.

BROCHURE SENT ON REQUEST
Contact: Medical Director, 530 E. Queen Street, Hampton, Va. 23369
Telephone (804) 722-2504

STUART CIRCLE HOSPITAL

413-21 STUART CIRCLE RICHMOND, VIRGINIA

Medicine:
MANFRED CALL, III, M.D.
ALEXANDER G. BROWN, III, M.D.
JOHN D. CALL, M.D.
WYNDHAM B. BLANTON, JR., M.D.
FRANK M. BLANTON, M.D.
WILLIAM W. MARTIN, JR., M.D.
JAMES R. WICKHAM, M.D.

Obstetrics and Gynecology:
SPOTSWOOD ROBINS, M.D.
DAVID C. FORREST, M.D.
JOSEPH C. PARKER, M.D.
WILLIAM M. OPPENHIMER, M.D.

Orthopedics:
BEVERLEY B. CLARY, M.D.
JAMES B. DALTON, JR., M.D.
FRANKLIN P. WATKINS, M.D.

Pediatrics:
EDWARD G. DAVIS, JR., M.D.
THOMAS P. OVERTON, M.D.
ALBERT S. THOMPSON, JR., M.D.
EDWARD J. WILEY, M.D.

Roentgenology and Radiology:
HUNTER B. FRISCHKORN, JR., M.D.
WILLIAM C. BARR, M.D.
JAMES W. PROFFITT, M.D.

Anesthesiology:
WILLIAM B. MONCURE, M.D.
HETH OWEN, JR., M.D.

Surgery:
A. STEPHENS GRAHAM, M.D.
CHARLES R. ROBINS, JR., M.D.
CARRINGTON WILLIAMS, M.D.
RICHARD A. MICHAUX, M.D.
CARRINGTON WILLIAMS, JR., M.D.
ARMISTEAD M. WILLIAMS, M.D.
JAMES R. DARDEN, JR., M.D.
WYATT S. BEAZLEY, III, M.D.

Urological Surgery:
FRANK POLE, M.D.
HARRY S. ROWLAND, JR., M.D.

Plastic Surgery:
HUNTER S. JACKSON, M.D.

Ophthalmology, Otolaryngology:
RICHARD W. DODD, M.D.
J. WARREN MONTAGUE, M.D.

Pathology:
W. SCOTT GILMER, JR., M.D.

Physical Therapy:
WILLIAM J. COWAN, R.P.T.

Director:
CHARLES C. HOUGH

ST. LUKE'S HOSPITAL

Established 1882
Hunter H. McGuire, M.D.

McGUIRE CLINIC, Inc.

Established 1923
Stuart McGuire, M.D.

1000 West Grace Street
Richmond, Virginia

General Surgery & Gynecology
Joseph W. Coxe, III, M.D.
H. Fairfax Conquest, M.D.
Gilbert H. Bryson, M.D.
William M. Crouch, M.D.

Anesthesiology
Beverley Jones, M.D.

Physical Therapy
Elizabeth L. Watson, R.P.T.

Internal Medicine
John P. Lynch, M.D.
John B. Catlett, M.D.
Robert W. Bedinger, M.D.
David L. Litchfield, M.D.
Burness F. Ansell, Jr., M.D.
W. Wayne Key, Jr., M.D.
Randolph M. Halloran, M.D.
Hilton R. Almond, M.D.
James A. Repass, M.D.

Radiology
Henry S. Spencer, M.D.
Donald P. King, M.D.

Isotopes
David L. Litchfield, M.D.

Pathology
Hubert R. White, Jr., M.D.

Hospital Administrator
Gerald J. LaGesse

Director of Nurses—St. Luke's Hospital
Ann M. Urbine, R.N.

School of Nursing
Ann M. Urbine, R.N., Director
Joan B. Hovis, R.N., Dir. of Ed.
Elizabeth H. Ellett, R.N., Instructor

Clinic Manager
S. Taylor Ware, Jr.

Director of Nurses—McGuire Clinic, Inc.
Mary E. Simmons, R.N.

TUCKER HOSPITAL Inc.

212 West Franklin Street

Richmond, Virginia

A private hospital for diagnosis and treatment of psychiatric and neurological disorders. Hospital and out-patient services.

James Asa Shield, M.D.
George S. Fultz, Jr., M.D.
Catherine T. Ray, M.D.

Weir M. Tucker, M.D.
James Asa Shield, Jr., M.D.

SAINT ALBANS

PSYCHIATRIC HOSPITAL

Radford, Virginia

STAFF:

William D. Keck, M.D.
Morgan E. Scott, M.D.
David S. Sprague, M.D.
Delano W. Bolter, M.D.
Edward E. Cale, M.D.
Terkild Vinding, M.D.
James P. King, M.D. (Emeritus)

Clinical Psychology:

Thomas C. Camp, Ph.D.
Carl McGraw, Ph.D.
Allen S. Rowe, Ph.D.

George K. White
Administrator
Richard A. Kennedy, Jr.
Asst. Administrator

ANNOUNCING THE OPENING OF

THE WADDELL CENTER

for Alcohol and Related Problems

112 Painter Street 703 236-2994
GALAX, VIRGINIA 24333

Walter K. Helton, M.Div., Director

- Twenty-Eight day residential program
- Services for men & women
- Detoxification available
- Telephone consultation encouraged
- Quiet neighborhood on the rim of the Blue Ridge

In a recent survey, 90% of patients said they would have annual checkups *if their physicians told them to do so.* This confirmed what we have long known—your key role, doctor, in motivating your patients to follow good health practices. We alert the public with facts about cancer. You follow through by urging regular checkups. A life-saving combination.

American Cancer Society

Tidewater Psychiatric Institute

1701 Will-O-Wisp Drive
Virginia Beach, Virginia 23454

and

1005 Hampton Boulevard
Norfolk, Virginia 23507

Private hospitals for the treatment of psychiatric disorders of adults and adolescents, alcoholism, and drug addiction. Residential special education for emotionally disturbed adolescents.

David C. Butler
Administrator

Julian W. Selig, Jr., M.D.
Hospital Director, Norfolk

Stuart Ashman, M.D.
Hospital Director, Virginia Beach

(Brochure sent on request)

Fourth Decade of Nursing

Accredited by the Joint Commission on Accreditation and Certified for Medicare

MRS. PLYLER'S NURSING HOME

KATE E. PLYLER (1876-1947)

GENE CLARK REGIRER (1912-1962)

A private nursing home dedicated to extended, intermediate and custodial care

1615 Grove Avenue, Richmond, Virginia, Telephone 353-3981

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Pulaski

Home For Adults

★ Newly remodeled and decorated
★ Private & semi-private rooms
★ Assistant on duty 24 hours a day
★ Medical facilities near by
★ Reasonable rates, $250 & up.

Write or phone for further information: P.O. Box 938, Pulaski, Va. 24301 or phone 980-2200.

Russ Penner,
Business Manager

Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands, no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: **Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl) 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512

When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

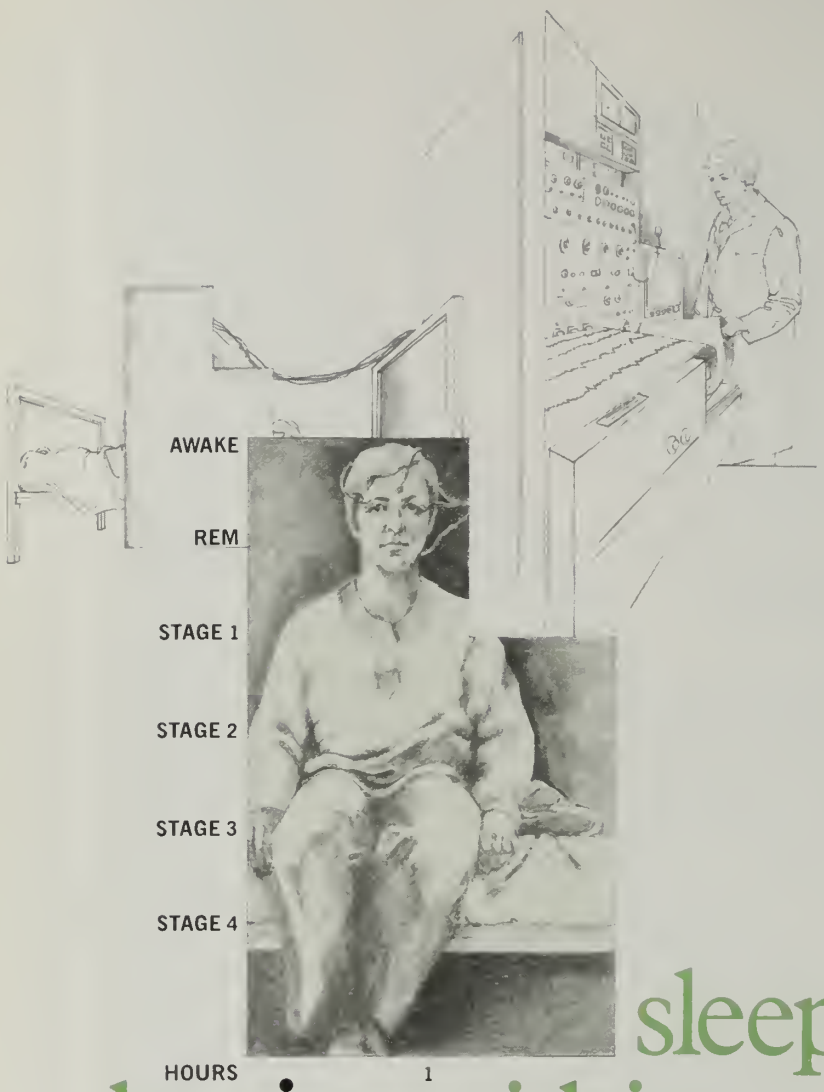
Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

udies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



sleep begins within 17 minutes, on average ..

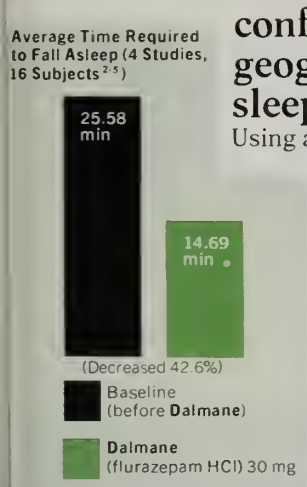
an initial benefit of

Dalmane®

(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage.[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

almane is generally well tolerated; morning "hang-over" has been relatively frequent. While dizziness, drowsiness, lightheadedness and the like have en noted most often, particularly in the elderly and debilitated, physicians ould be aware of the possibility of more serious reactions, as noted below.

fore prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, summary of which follows:

dications: Effective in all types of insomnia characterized by difficulty in falling asleep, quent nocturnal awakenings and/or early morning awakening; in patients with recurring somnia or poor sleeping habits; and in acute or chronic medical situations requiring restful ep. Since insomnia is often transient and intermittent, prolonged administration is generally t necessary or recommended.

ntraindications: Known hypersensitivity to flurazepam HCl.

arnings: Caution patients about possible combined effects with alcohol and other CNS pressants. Caution against hazardous occupations requiring complete mental alertness g., operating machinery, driving). Use in women who are or may become pregnant only when tential benefits have been weighed against possible hazards. Not recommended for use in rsons under 15 years of age. Though physical and psychological dependence have not been ported on recommended doses, use caution in administering to diction-prone individuals or those who might increase dosage.

ecautions: In elderly and debilitated, initial dosage should be ited to 15 mg to preclude oversedation, dizziness and/or ataxia. combined with other drugs having hypnotic or CNS-depressant ects, consider potential additive effects. Employ usual precautions patients who are severely depressed, or with latent depression or icidal tendencies. Periodic blood counts and liver and kidney ction tests are advised during repeated therapy. Observe usual cautions in presence of impaired renal or hepatic function.

verse Reactions: Dizziness, drowsiness, lightheadedness, ggering, ataxia and falling have occurred, particularly in elderly debilitated patients. Severe sedation, lethargy, disorientation and ma, probably indicative of drug intolerance or overdosage, have en reported. Also reported were headache, heartburn, upset mach, nausea, vomiting, diarrhea, constipation, GI pain, nervous- ss, talkativeness, apprehension, irritability, weakness, palpitations, est pains, body and joint pains and GU complaints. There have o been rare occurrences of sweating, flushes, difficulty in focusing, rred vision, burning eyes, faintness, hypotension, shortness of ath, pruritus, skin rash, dry mouth, bitter taste, excessive saliva- n, anorexia, euphoria, depression, slurred speech, confusion, tlessness, hallucinations, and elevated SGOT, SGPT, total and ect bilirubins and alkaline phosphatase. Paradoxical reactions, ., excitement, stimulation and hyperactivity, have also been ported in rare instances.

sage: Individualize for maximum beneficial effect. *Adults:* 30 mg ual dosage; 15 mg may suffice in some patients. *Elderly or debil- ted patients:* 15 mg initially until response is determined.

pplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

when restful sleep is indicated

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

FERENCES: 1. Kales A, *et al: Arch Gen Psychiatry 23:*226-232, Sep 1970
Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and ep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric sociation, Washington DC, May 3-7, 1971
Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, descreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles and Single Unit Packages of 100 capsules.

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

KEEP THE HYPERTENSIVE PATIENT ON THERAPY
KEEP THERAPY SIMPLE WITH

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

No potassium supplements
No special K^+ rich diets
Just 'Dyazide' once daily or twice daily

Studies have demonstrated that two prime reasons patients drop out of hypertensive therapy are: (1) the patient failed to understand directions, and (2) the regimen was overly complicated.* Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

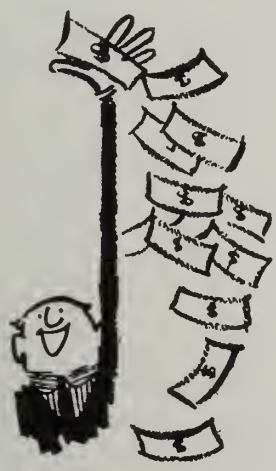
*E.D. Freis: The Modern Management of Hypertension, V.A. Information Bulletin, 11-35.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP

OVER $1,000,000 IN BENEFITS PAID TO THE MEDICAL SOCIETY OF VIRGINIA MEMBERS

Long-Term Disability Insurance At Low Group Rates

A Doctor's earned income can stop when he is **SICK** or **HURT** and **CAN'T WORK**. Long-term disability insurance could provide the needed **CASH** when this happens.



Here are a few of the outstanding features of this plan:

1. Lifetime accident benefits
2. Sickness benefits for up to seven years or to age 65
3. **UNIQUE** definition of disability (7 year benefit period if sickness prevents you from engaging in your specialty)
4. Confinement not required for disability benefits
5. Federal income tax-free benefits

ALSO

As a participant in this plan you receive:

1. Special low group rates
2. Convenient local claim service

Interested? To find out more, simply return the coupon below to the administrator nearest you.

THE PRICE OF A STAMP MAY ALSO BUY YOU PEACE OF MIND

Murphy Insurance & Travel
108 2nd St., S. E.
Charlottesville, Virginia 22901
295-4157

Ernest L. Baker Associates
Suite 1118
205 34th Street
Virginia Beach, Va. 23451
425-1892

Suter Associates, Inc.
2425 Wilson Blvd.
Arlington, Virginia 22201
525-6700

G. C. French Agency, Inc.
1004 North Thompson Street
Richmond, Virginia 23230
358-7141

General Insurance of Roanoke
Shenandoah Building
Roanoke, Virginia 24011
345-8148

I would like more information about the Long-term Group Disability Insurance sponsored by The Medical Society of Virginia.

Name ..... Phone .....

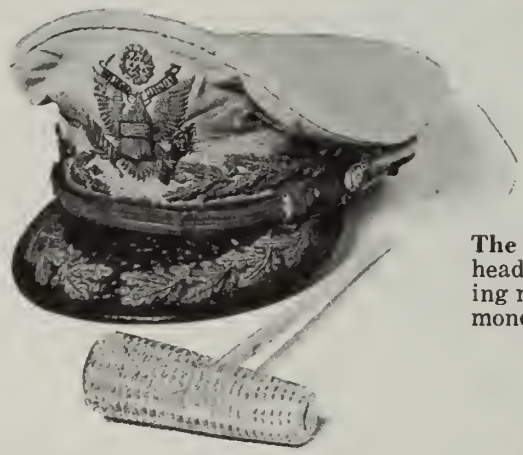
Address .....

City .....State ..... Zip.....

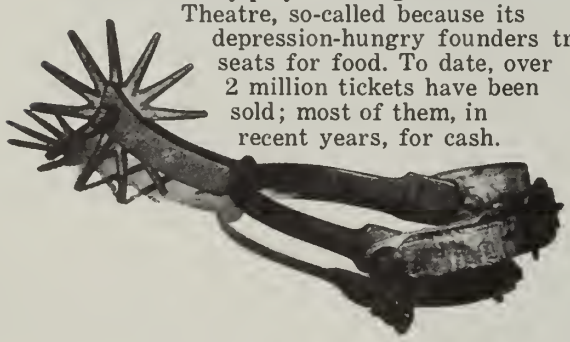
Virginia has a romantic past. And lots of mementos to prove it.

Woodrow Wilson Slept Here. At Staunton's stately "Manse", you can see the crib that held a future president. And the home where Jessie Wilson gave birth to the son who later gave birth to the League of Nations with its vision of world-wide peace.

The General's Assembly. Douglas MacArthur called Norfolk home, though he was born in Arkansas ("while his parents were away", the Norfolk paper said). Here, at the MacArthur Memorial, you can see the possessions of this great soldier.



The Doll Who Spied For Dixie. She had a head for smuggling. Hollow. Just right for carrying medicines across Union lines. She's at Richmond's Confederate Museum now. In retirement.



Broadway In The Blue Ridge. These spurs were worn in an early play at Abingdon's Barter Theatre, so-called because its depression-hungry founders traded seats for food. To date, over 2 million tickets have been sold; most of them, in recent years, for cash.

The Mighty In Miniature. These water color miniatures of the first President and his lady, painted from life, are now on view in Williamsburg. Come see them.

Visit, write or call
VIRGINIA STATE TRAVEL SERVICE
9th & Grace Streets, Richmond 23219
phone: (703) 770-4484

This advertisement is published by Virginia Medical Monthly as a Public Service.

YOU CAN SEE STANMAR HOMES in Alabama, Arkansas, Colorado, Conn., Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, N. Carolina, Ohio, Pennsylvania, Rhode Island, S. Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Canada, Puerto Rico and The Virgin Islands.

the custom home that doesn't cost more

Every Stanmar home is individualized to fit your needs, your site, and your budget.

If you are planning to build a primar residence or leisure home, send $2.00 for our full color brochure, "New Directions in Home Design".

stanmar inc

Box 0-46, Sudbury, MA 01776 (617) 443-9922

ATLANTA • BOSTON • NEW YORK

An Open Letter to Medical Professionals

Many physicians are seeking relief from the ever increasing pressures of medical practice within the private health care sector. The United States Air Force Medical Service is offering an alternative form of medical practice to all physicians 58 years of age or younger. Frankly, we are proud of the quality health care the Air Force Medical Service provides and would briefly take this opportunity to present you a challenge to service.

The Air Force physician practices medicine in a collective endeavor with the entire gamut of medical specialties and the finest trained allied health care professionals available. All United States Air Force Hospitals are accredited by the Joint Commission and are equipped with the finest medical instrumentation available. The very finest health care is provided to every patient without regard to the patient's ability to pay. The professional challenges of medical practice and the medical education opportunities within the Air Force Medical Service are unlimited; however, the Air Force physician normally has more time for leisure, travel, family and personal development in comparison to his civilian counterpart. The liberal fringe benefits made available to the Air Force physician provide for a secure, predictable and satisfying life style; e.g., 30 day paid vacation annually, advancement, travel, medical education, professional pay and recreational opportunities.

Your time is very valuable and thus the brevity of this informational offering. However, you owe it to yourself to consider this alternative medical practice. Positions are available in primary health care delivery, all major medical specialties, Hospital Directorships and medical research. Assignments can be arranged for two, three or four years. Initial appointment can range up to Colonel based on education and experience. Assignments to a specific Air Force Hospital may be arranged within the United States or overseas.

For further information call or write:

The Air Force Medical Personnel Counsellor
421 North Howard Street
Baltimore, Md. 21201
Area Code 301-385-2858

A resource for therapies, including a school for emotionally disturbed children

The Human Resource Institute of Norfolk offers individualized treatment programs within a therapeutic community to all ages and diagnostic categories of mentally and emotionally disturbed adults, adolescents, and children. By utilizing various individual and group therapies the patient becomes aware of his own feelings and his relationship to others. The diversified therapies increase the individual's self-esteem and encourage him to function in an effective manner.

An intensive program of community activities offered through the Creative Services Department promotes interpersonal relationships among patients and staff, and stimulates the patient's creative potential. Activities such as dance therapy, recreational therapy, occupational therapy, psychodrama, music therapy, and personal appearance therapy are individualized according to the patient's needs.

An integral part of treatment for the emotionally disturbed adolescent or child is the continuance of his education in a therapeutically controlled environment. HUMAN RESOURCE ACADEMY, a fully licensed and certified school, promotes learning with teachers specially trained in teaching the emotionally disturbed and learning disabled students.

Pharmaceutical therapy and close association with consultant physicians of all specialities are important aspects of patient care at Human Resource Institute.

To find out more about our comprehensive program contact the Co-Medical Directors, Dietrich W. Heyder, M.D., F.A.P.A., or Fathy A. Abdou, M.D., F.A.P.A., Human Resource Institute of Norfolk, Human Resources Building, 100 Kingsley Lane, Norfolk, Virginia 23505. Phone (804) 489-1072.

Oriental Rugs

My name is Amir Zinat; I am Iranian. Years ago as a graduate student in the U.S., I noticed the big difference in the price of Orientals in my homeland and here. So I asked my people to send me many rugs. I have chosen, as my business, to sell these rugs at more reasonable prices. These rugs may be exchanged, are guaranteed to increase in value, are selected by natives, and the price is fully refundable.

If you are purchasing an Oriental rug, you need to learn about them. Mistakes can be costly; so know some facts before you buy:

1. There are many rugs around which may look similar to Persian ones and may be named Iranian-sounding names to confuse you. Look for the label, "Made in Iran".
2. Even all genuine Orientals are not Persian and not necessarily what you have learned about their value and durability.
3. Stores and auctioneers often sell unauthentic or worn-out Persian rugs for far too much. A good Iranian rug is not out of reach, and if it is genuine it will hold or increase its value.
4. Do not count much on the words, Princess, Contract, Signed, Collector's Item, Royal, Imperial, Prayer, etc. They are all part of a sales pitch or gossip. Rugs are named by the village or, more often, the region of origin. The quality of the rug may vary greatly regardless of the name. So, you should judge a rug by its own individual merits, not by the name.

I would be happy to help you learn more about Orientals and assist you in any way in your selection.

Roller-type Loom

Please call **358-1711**
also recommend me to your friends
Thank you
Amir Zinat

2002½ Staples Mill Road
Richmond, Virginia

(on the back side of Cross Roads Shopping Center)

For the Discriminating
Eye Physician

Depend on the Services of a
Guild Optician

IN LYNCHBURG, VA.

A. G. JEFFERSON
INC.

Main Office
Allied Arts Buildings

Branch Office
2010 Tate Springs Road

REGISTERED OPTICIANS

WE DO NOT PRESCRIBE GLASSES—
WE MAKE THEM

The Medical Society
of Virginia

ANNUAL MEETING

Williamsburg

November 3-6, 1974

'CIRCUBID'™
(Ethaverine HCl–150 mg.)
Time Disintegrating Capsules

Caution: Federal law prohibits dispensing without prescription.

Each Capsule* contains: Ethaverine HCl. 150 mg.

ACTION: Ethaverine HCl. acts directly on the smooth muscle cells without involving the autonomic nervous system or its receptors.

INDICATIONS: In peripheral and cerebral vascular insufficiency associated with arterial spasm, in spastic conditions of the gastro-intestinal and genitourinary tracts.

CONTRAINDICATIONS: Contraindicated in the presence of complete atrioventricular dissociation.

PRECAUTIONS: It should be administered with caution in patients with glaucoma. It should not be used in pregnant women or in women of childbearing age unless directed by a physician.

ADVERSE REACTIONS: Even though the incidence of side effects as reported in literature is very low, it is possible for a patient to evidence nausea, anorexia, abdominal distress, dryness of the throat, hypotension, flushing, sweating, vertigo, respiratory depression, cardiac depression, cardiac arrhythmia and headache. If these side effects occur, reduce dosage or discontinue medication.

DOSAGE: The usual adult dose is 300 mg. daily, one capsule every 12 hours. In more difficult cases the dosage may be increased to 600 mg. daily as determined by the physician. It is most effective given early in the course of the vascular disorder. Because of the chronic nature of the disease long term therapy is required.

*Manufactured to provide a prolonged therapeutic effect.

HOW SUPPLIED: Bottles of 100 and 1000

W. F. MERCHANT
PHARMACEUTICAL CO., INC.
Warrenton, Virginia 22186

"In a good old age."
—GENESIS 15:5

'CIRCUBID'™
(Ethaverine HCl)
150 mg. Capsules

W.F. MERCHANT PHARMACEUTICAL CO., INC.
4 SOUTH THIRD ST. • P. O. BOX 527 • WARRENTON, VIRGINIA 22186

OFFICERS AND COUNCILORS OF THE MEDICAL SOCIETY OF VIRGINIA 1973-1974

President—John A. Martin, M.D., Roanoke *President-Elect*—William R. Hill, M.D., Richmond
Past-President—Carl E. Stark, M.D., Wytheville
Vice-Presidents—1st: Raymond S. Brown, M.D., Gloucester 2nd: James C. Respess, M.D., Charlottesville
3rd: James S. Kitterman, M.D., Norfolk

Executive Vice-President—Robert I. Howard, Richmond
State Commissioner of Health—Mack I. Shanholtz, M.D., Richmond
Editor, "Virginia Medical Monthly"—Harry J. Warthen, M.D., Richmond
Speaker of the House—William J. Hagood, Jr., M.D., Clover
Vice Speaker—K. K. Wallace, Jr., M.D., Virginia Beach

COUNCILORS	(District)	VICE-COUNCILORS
Harold L. Williams, M.D., Newport News	1st	Walter A. Eskridge, M.D., Parksley
Charles E. Davis, Jr., M.D., Norfolk	2nd	Gervas S. Taylor, Jr., M.D., Norfolk
Carrington Williams, Jr., M.D., Richmond	3rd	Charles M. Caravati, Jr., M.D., Richmond
George J. Carroll, M.D., Suffolk	4th	Gordon G. Birdsong, M.D., Franklin
Girard V. Thompson, Sr., M.D., Chatham	5th	Anthony J. Munoz, M.D., Farmville
H. C. Alexander, III, M.D., Roanoke	6th	Douglas E. Pierce, M.D., Roanoke
George M. Nipe, M.D., Harrisonburg	7th	Harry L. Westfall, Jr., M.D., *Fredericksburg*
Thomas L. Lucas, M.D., Alexandria	8th	Harry C. Kuykendall, M.D., Alexandria
James Hal Smith, M.D., Christiansburg	9th	Joseph H. Early, Jr., M.D., Hillsville
W. Leonard Weyl, M.D., Arlington	10th	C. Barrie Cook, M.D., Fairfax

DELEGATES AND ALTERNATES TO AMERICAN MEDICAL ASSOCIATION

Delegates—1973-1974
W. Callier Salley, M.D., Gloucester Point

1974-1975
William S. Hotchkiss, M.D., Norfolk
Michael A. Puzak, M.D., Arlington

Alternates—1973-1974
Percy Wootton, M.D., Richmond

1974-1975
F. Ashton Carmines, M.D., Newport News
Carl E. Stark, M.D., Wytheville

INDEX TO ADVERTISERS

Abbott Laboratories ---- 877
American Cancer Society ---- 902
Bayberry Psychiatric Hospital ---- 900
Burroughs-Wellcome ---- 837
Commercial Insurance ---- 909
Commonwealth Psychiatric Center ---- 899
David Dyer Ins. ---- 829
Dorsey Laboratories ---- 830, 897
Human Resources Institute of Norfolk ---- 912
Jefferson, A. G. ---- 914
Johnston-Willis Hospital ---- 904
Eli Lilly and Co. ---- 842
McNeil Laboratories, Inc. ---- 841
Medical Society of Virginia, The ---- 914
W. F. Merchant Pharmaceutical Co. ---- 914-915
Oriental Rugs ---- 913
People's Service Drug Stores ---- 838
Pharmaceutical Manufacturers Assn. ---- 880, 881
Plyler's Nursing Home, Mrs. ---- 903
Pulaski Home ---- 904
Reed & Carnrick ---- 840
Retirement Plan ---- 834
A. H. Robins Company ---- 835, 836
Roche Laboratories ---- 2nd Cover, 827, 832, 833, 906, 907, 3rd and 4th Covers
Saint Alban's Psychiatric Hospital ---- 902
Searle ---- 878, 879
Smith, Kline & French ---- 908
St. Luke's Hospital ---- 901
Stanmar, Inc. ---- 911
Stuart Circle Hospital ---- 900
Tidewater Psychiatric Institute ---- 903
Tucker Hospital, Inc. ---- 901
U. S. Air Force Medical Service ---- 911
Virginia National Bank ---- 839
Virginia Travel Service ---- 910
Waddell Center ---- 902
Wallace Pharmaceuticals ---- 904, 905
Webcon Pharmaceuticals ---- 831
Williams Printing Company ---- 834

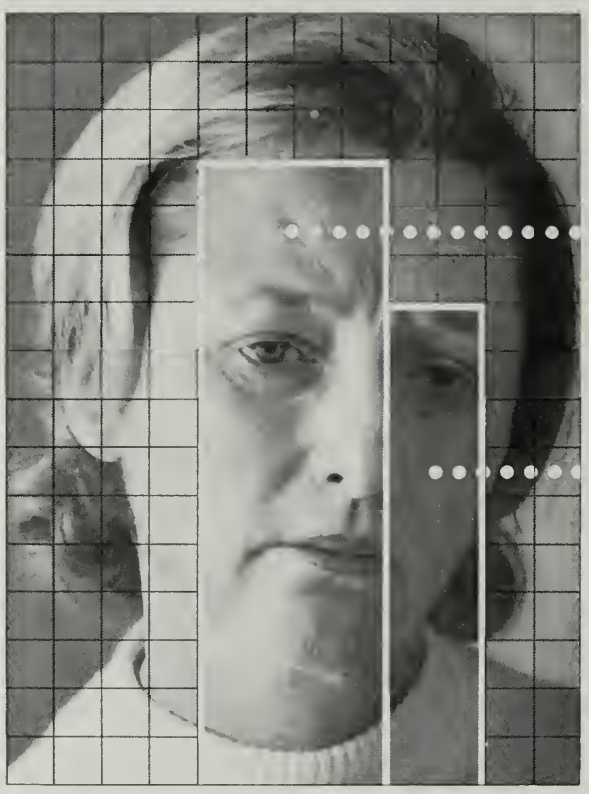
OFFICIAL PUBLICATION
OF THE
MEDICAL SOCIETY
OF VIRGINIA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

Virginia Medical Monthly

November, 1974 Volume 101

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in fre and/or severity of grand mal seizur require increased dosage of standa convulsant medication; abrupt with may be associated with temporary i crease in frequency and/or severity seizures. Advise against simultanec gestion of alcohol and other CNS de sants. Withdrawal symptoms (simil those with barbiturates and alcohol occurred following abrupt discontir (convulsions, tremor, abdominal ar cle cramps, vomiting and sweating addiction-prone individuals under

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
NOV 19 1974

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate their action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April, 1874)

PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF VIRGINIA

4205 DOVER ROAD, RICHMOND, VIRGINIA 23221

EDITORIAL BOARD

Harry J. Warthen, M.D.
Chairman and Editor

H. Lamont Pugh, M.D.

C. V. Cimmino, M.D.

John A. Owen, Jr., M.D.

Gordon W. Jones, M.D.

William H. Kaufman, M.D.

Robert Mitchell, Jr., M.D.

W. Leonard Weyl, M.D.

Fred J. Spencer, M.D.

Robert L. Cassidy, M.D.

E. Spencer Watkins
Managing Editor
4205 Dover Road
Richmond, Virginia 23221
Telephone 353-2721

Annual Subscription—$4.00
Single Copies—50¢

GUEST EDITORIAL
Pulmonary Rehabilitation—A Hope for the Breathless—*Emil J. Kleinholz, Jr., M.D.* 939
ORIGINAL ARTICLES
What is a Good Hypertensive Workup? Who Needs It?—*A. Jarrell Raper, M.D.* 942
Practical Office Management of Chronic Hypertension—*A. Jarrell Raper, M.D.* 945
New Normal Ranges for the Radioiodine Uptake in Tidewater Virginia—*P. M. Fitzer, M.D.* 948
Continuous Electrocardiographic Monitoring in Acute Respiratory Failure—*Emil J. Kleinholz, Jr., M.D.*, and *Michele Romano, R.N.* 951
Growing Skull Fractures Syndrome—*Abdon Reina, M.D.* 955
Splenic Abscess—*Samuel D. Graham, M.D.*, and *Gerald T. Golden, M.D.* 958
MEDICAL GRAND ROUNDS
Idiopathic Edema 961
DIAGNOSTIC LABORATORY MEDICINE
Antimicrobial Susceptibility of Common Bacterial Species—1974—*Harry P. Dalton, Ph.D., Marvin J. Allison, Ph.D.*, and *Mario R. Escobar, Ph.D.*..... 975
PUBLIC HEALTH
Virginia Uterine Cancer Detection Campaign 977
MENTAL HEALTH
An Analysis of the Patient Population in a Small State-Run Mental Hospital—*H. Bruml, Ph.D*, and *L. Copen* 979
MEDICARE—PART B 988
CORRESPONDENCE
Fairfax Hospital Issue—*Francis H. McGovern, M.D.* 988
WOMAN'S AUXILIARY
Irene Hoge—New President—*Thelma V. Hoke* ... 989
EDITORIAL
William R. Hill, M.D., President—*Harry J. Warthen, M.D.* 991
NEWS 994
OBITUARY 996

The Monthly is not responsible for the opinions and statements of its contributors.
All advertisements are accepted subject to the approval of the Editorial Board.
$4.00 of membership dues is payable for one year's subscription to The Virginia Medical Monthly.

Second Class Postage paid at Richmond, Virginia.

INDEX TO ADVERTISERS—1014

THE GREATEST SINGLE THREAT TO YOUR FINANCIAL STABILITY IS

Disability

NOW YOU CAN INSURE AGAINST THAT THREAT.

with Disability Income Program with New Maximum Benefits

Now for a very modest premium you can have up to $2,000 a month if you are disabled and unable to practice. Actually it's $2,200 with the 10% bonus now in effect. And it's all tax-free.

other features:

- Survivor's benefit at no increase in premium
- Coverage anywhere in the world, 24 hours a day, 365 days a year
- Special low-cost plan designed for the younger doctors
- Renewable to age 75 ■ Conversion privilege to age 65
- Few exclusions—even private flying is included
- Pays in addition to any other insurance you may carry

You can receive information immediately by writing or phoning (collect) the administrator. A minute of your time now will provide you and your family an income when it's needed most.

Program administered by:

David A. Dyer & Associates
Medical Arts Building
Roanoke, Virginia 24011
Call Collect: (703) 344-5000

FRED W. HALL
Northern Representative
8924 Orange Hunt Lane
Annandale, Virginia 22003
Call: 461-8087

FRED E. HAMLIN, JR.
Associate

DAVID A. DYER & ASSOCIATES has been awarded the seal of the American Institute of Professional Association Group Insurance Administrators. Membership in this group is by invitation only.

OTHER PLANS FOR YOUR PROTECTION

****Daily In-Hospital (up to $50)***
Major Hospital Nursing
$100,000 Excess Major Medical (Lifetime Renewable)*
****High Limit Accidental Death & Dismemberment ($250,000)**
Professional Overhead Expense
****Guarantee Issue Life Insurance***
Special Income Protection*
Preferred Physicians Disability Income
Non-Cancellable and Guaranteed Renewable Disability Income

*Guarantee Issue **Available to Employees

These plans are IDEAL for INDIVIDUALS, PARTNERSHIPS and CORPORATIONS

STAFF PHYSICIAN

Large, Modern Industrial Complex

This position, with the world's leading designer and manufacturer of ships, affords the industrially-oriented M.D. an outstanding professional opportunity.

You will be a key member of our well-equipped medical center . . . boasting extensive lab facilities in clinical medicine & environmental life sciences . . . as well as a large, professional staff. Your involvement will include performing clinical examinations of employees, treating industrial injuries and occupational diseases. U.S. citizenship required. In addition to an attractive compensation package we offer the benefit of a regular schedule and the scenic beauty of Newport News, Virginia—well known for its exceptional historical, educational, recreational and cultural facilities.

If interested in this outstanding opportunity, send curriculum vitae to Gerald O. Vaughn, Professional Recruiter-Salaried Employment, Newport News Shipbuilding, Newport News, Virginia 23607 . . . . or call (804) 247-4878

Newport News Shipbuilding

A Tenneco Co. **Newport News, Va.**

TENNECO **An Equal Opportunity Employer**

STAFF PHYSICIAN

To assist in establishing comprehensive Occupational Medical Program in our new Medical Facility, which is fully equipped for minor surgery, physiotherapy and radiology. Sophisticated diagnostic equipment in new clinical laboratory facilities.

Opportunity for full professional development in a modern, industrial occupation environment. Salary commensurate with experience and qualifications. Full company-paid benefit program.

Mail resume, with details of education, work experience and salary history, to:

Salaried Employment Supervisor

PM PHILIP MORRIS

PHILIP MORRIS

U.S.A.

P. O. BOX 26603, RICHMOND, VA. 23261

An Equal-Opportunity Employer

'CIRCUBID'™

(Ethaverine HCl–150 mg.)

Time Disintegrating Capsules

Caution: Federal law prohibits dispensing without prescription.

Each Capsule* contains: Ethaverine HCl. 150 mg.

ACTION: Ethaverine HCl. acts directly on the smooth muscle cells without involving the autonomic nervous system or its receptors.

INDICATIONS: In peripheral and cerebral vascular insufficiency associated with arterial spasm, in spastic conditions of the gastro-intestinal and genitourinary tracts.

CONTRAINDICATIONS: Contraindicated in the presence of complete atrioventricular dissociation.

PRECAUTIONS: It should be administered with caution in patients with glaucoma. It should not be used in pregnant women or in women of childbearing age unless directed by a physician.

ADVERSE REACTIONS: Even though the incidence of side effects as reported in literature is very low, it is possible for a patient to evidence nausea, anorexia, abdominal distress, dryness of the throat, hypotension, flushing, sweating, vertigo, respiratory depression, cardiac depression, cardiac arrhythmia and headache. If these side effects occur, reduce dosage or discontinue medication.

DOSAGE: The usual adult dose is 300 mg. daily, one capsule every 12 hours. In more difficult cases the dosage may be increased to 600 mg. daily as determined by the physician. It is most effective given early in the course of the vascular disorder. Because of the chronic nature of the disease long term therapy is required.

*Manufactured to provide a prolonged therapeutic effect.

HOW SUPPLIED: Bottles of 100 and 1000

W. F. MERCHANT
PHARMACEUTICAL CO., INC.
Warrenton, Virginia 22186

"In a good old age."
—GENESIS 15:5

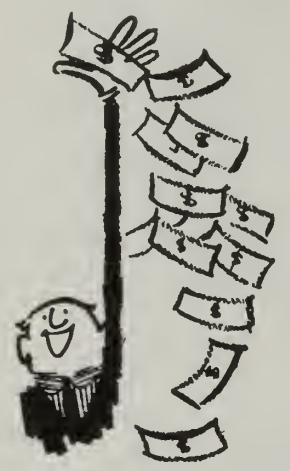
'CIRCUBID'™
(Ethaverine HCl)
150 mg. Capsules

W.F. MERCHANT PHARMACEUTICAL CO., INC.
4 SOUTH THIRD ST. • P. O. BOX 527 • WARRENTON, VIRGINIA 22186

OVER $1,000,000 IN BENEFITS PAID TO THE MEDICAL SOCIETY OF VIRGINIA MEMBERS

Long-Term Disability Insurance At Low Group Rates

A Doctor's earned income can stop when he is **SICK** or **HURT** and **CAN'T WORK**. Long-term disability insurance could provide the needed **CASH** when this happens.



Here are a few of the outstanding features of this plan:

1. Lifetime accident benefits
2. Sickness benefits for up to seven years or to age 65
3. **UNIQUE** definition of disability (7 year benefit period if sickness prevents you from engaging in your specialty)
4. Confinement not required for disability benefits
5. Federal income tax-free benefits

ALSO

As a participant in this plan you receive:

1. Special low group rates
2. Convenient local claim service

Interested? To find out more, simply return the coupon below to the administrator nearest you.

THE PRICE OF A STAMP MAY ALSO BUY YOU PEACE OF MIND

Murphy Insurance & Travel
108 2nd St., S. E.
Charlottesville, Virginia 22901
295-4157

Ernest L. Baker Associates
Suite 1118
205 34th Street
Virginia Beach, Va. 23451
425-1892

Suter Associates, Inc.
2425 Wilson Blvd.
Arlington, Virginia 22201
525-6700

G. C. French Agency, Inc.
1004 North Thompson Street
Richmond, Virginia 23230
358-7141

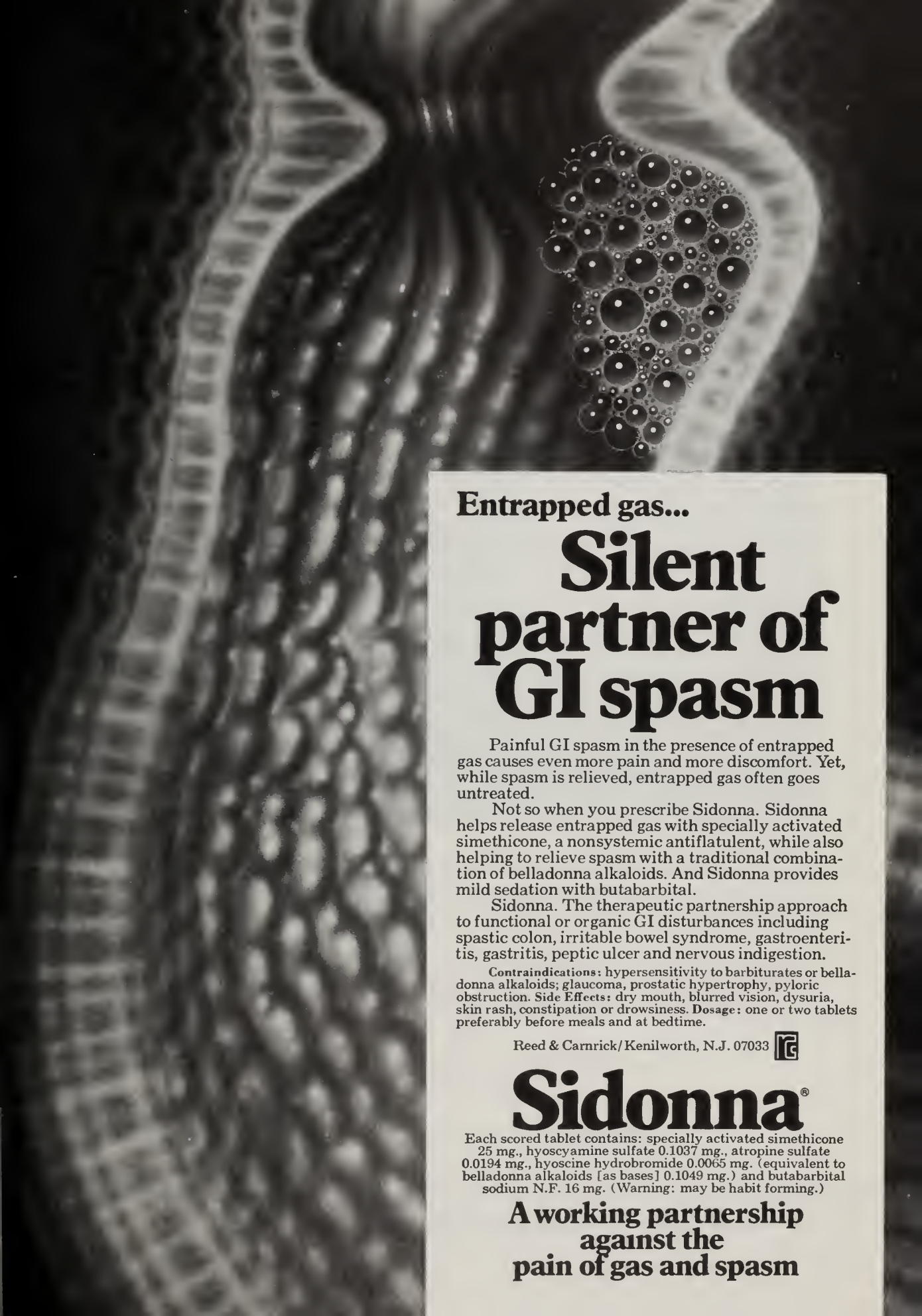
General Insurance of Roanoke
Shenandoah Building
Roanoke, Virginia 24011
345-8148

I would like more information about the Long-term Group Disability Insurance sponsored by The Medical Society of Virginia.

Name ..... Phone .....

Address .....

City .....State ..... Zip.....



Entrapped gas...

Silent partner of GI spasm

Painful GI spasm in the presence of entrapped gas causes even more pain and more discomfort. Yet, while spasm is relieved, entrapped gas often goes untreated.

Not so when you prescribe Sidonna. Sidonna helps release entrapped gas with specially activated simethicone, a nonsystemic antiflatulent, while also helping to relieve spasm with a traditional combination of belladonna alkaloids. And Sidonna provides mild sedation with butabarbital.

Sidonna. The therapeutic partnership approach to functional or organic GI disturbances including spastic colon, irritable bowel syndrome, gastroenteritis, gastritis, peptic ulcer and nervous indigestion.

Contraindications: hypersensitivity to barbiturates or belladonna alkaloids; glaucoma, prostatic hypertrophy, pyloric obstruction. **Side Effects:** dry mouth, blurred vision, dysuria, skin rash, constipation or drowsiness. **Dosage:** one or two tablets preferably before meals and at bedtime.

Reed & Carnrick/Kenilworth, N.J. 07033

Sidonna®

Each scored tablet contains: specially activated simethicone 25 mg., hyoscyamine sulfate 0.1037 mg., atropine sulfate 0.0194 mg., hyoscine hydrobromide 0.0065 mg. (equivalent to belladonna alkaloids [as bases] 0.1049 mg.) and butabarbital sodium N.F. 16 mg. (Warning: may be habit forming.)

A working partnership against the pain of gas and spasm

An Open Letter to Medical Professionals

Many physicians are seeking relief from the ever increasing pressures of medical practice within the private health care sector. The United States Air Force Medical Service is offering an alternative form of medical practice to all physicians 58 years of age or younger. Frankly, we are proud of the quality health care the Air Force Medical Service provides and would briefly take this opportunity to present you a challenge to service.

The Air Force physician practices medicine in a collective endeavor with the entire gamut of medical specialties and the finest trained allied health care professionals available. All United States Air Force Hospitals are accredited by the Joint Commission and are equipped with the finest medical instrumentation available. The very finest health care is provided to every patient without regard to the patient's ability to pay. The professional challenges of medical practice and the medical education opportunities within the Air Force Medical Service are unlimited; however, the Air Force physician normally has more time for leisure, travel, family and personal development in comparison to his civilian counterpart. The liberal fringe benefits made available to the Air Force physician provide for a secure, predictable and satisfying life style; e.g., 30 day paid vacation annually, advancement, travel, medical education, professional pay and recreational opportunities.

Your time is very valuable and thus the brevity of this informational offering. However, you owe it to yourself to consider this alternative medical practice. Positions are available in primary health care delivery, all major medical specialties, Hospital Directorships and medical research. Assignments can be arranged for two, three or four years. Initial appointment can range up to Colonel based on education and experience. Assignments to a specific Air Force Hospital may be arranged within the United States or overseas.

For further information call or write:

The Air Force Medical Personnel Counsellor
421 North Howard Street
Baltimore, Md. 21201
Area Code 301-385-2858

Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may intertere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands, no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections, an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. **Gonorrhea** In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also intertere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl) 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512

When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

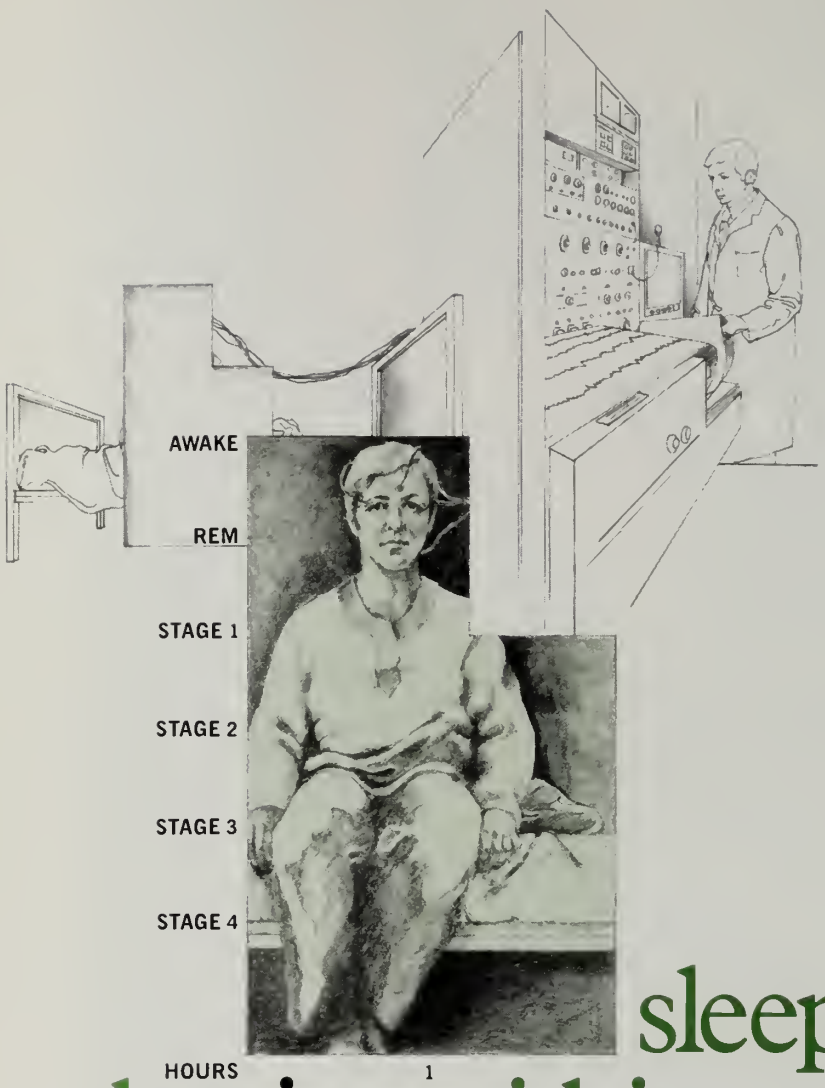
Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

Studies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



sleep begins within 17 minutes, on average ...

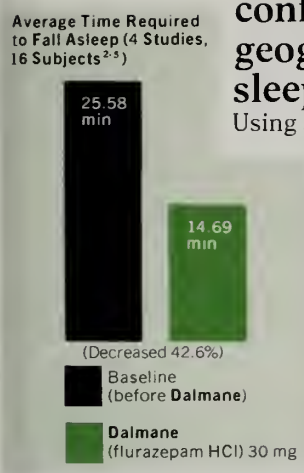
an initial benefit of

Dalmane®

(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage.[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

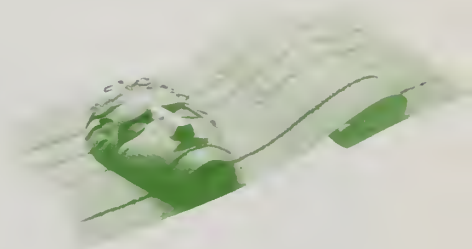
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

Dalmane®

(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales A, *et al: Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

The Role of the Detail Man

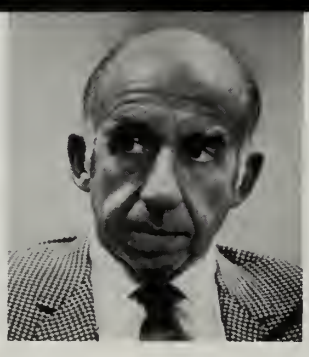
Opinion & Dialogue

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this countr there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center research people, and academic people have and that's in all likelih on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent film produced by the pharmaceutical industry. When they function in th

s He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

he Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all his material as a labor of love—hey are in the business of selling products for profit. In this regard he ambitious and improperly motiated sales representative can xert a negative influence on the racticing physician, both by preenting a one-sided picture of his roduct, and by encouraging the ractitioner to depend too heavily n drugs for his total therapy. In hese ways, the salesman has often istorted objective reality and ndermined his potential role as an ducator.

he Industry Responsibility

Since the detail man must be n information resource as well as representative of his particular harmaceutical company, he hould be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

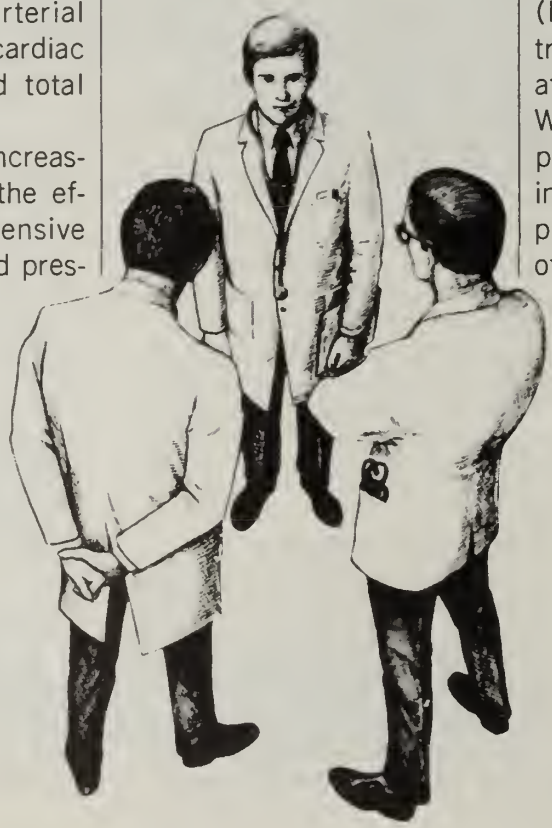
The more physicians consider the hemodynamics of lowering blood pressure...

Most physicians now agree on the importance of reducing blood pressure in the hypertensive patient. But high blood pressure exists, of course, only as part of a complete clinical picture. The hemodynamic profile of well-established essential hypertension is characterized by elevated arterial blood pressure, normal cardiac output, and increased total peripheral resistance.

And so, physicians are increasingly concerned with the effects of an antihypertensive agent not only on blood pressure itself but also on the hemodynamic pattern—in short, with the total effect of the drug. *Does* it indeed help lower blood pressure effectively? *Is* peripheral resistance reduced? *Are* cardiac output and renal functions maintained? And, also, is there likely to be drug-induced postural hypotension serious enough to pose a threat to the patient's cerebrovascular status?

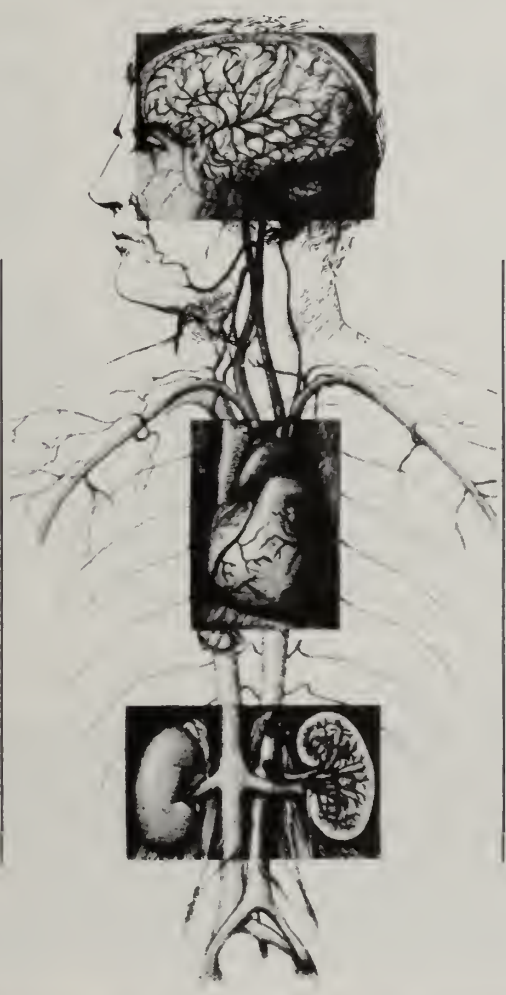
With this emphasis on overall drug performance has come a growing reliance on ALDOMET® (Methyldopa, MSD) in the treatment of sustained moderate hypertension.

With its unique hemodynamic profile, ALDOMET has drawn increasing attention and approval from physicians. First, of course, for its efficacy in



the more physicians rely on this unique antihypertensive

owering blood pressure. But here are other considerations s well. Cardiac output is usually maintained with no cardiac cceleration; in some patients he heart rate is actually lowed. Peripheral resistance s apparently reduced. LDOMET does not usually ompromise existing renal unction; it generally does not educe renal blood flow, glomerular filtration rate, or filration fraction. And ALDOMET sually does not cause symptomatic postural or exercise ypotension.



Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

In most cases of sustained moderate hypertension

TABLETS, 250 mg and 500 mg

ALDOMET®

(METHYLDOPA | MSD)

smoothly lowers blood pressure

NEW now available in **500 mg TABLETS** as well as the standard 250-mg tablets

or a brief summary of prescribing information, ease see following page.

In most cases of sustained moderate hypertension

ALDOMET®
(METHYLDOPA MSD)

smoothly lowers blood pressure

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatus, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

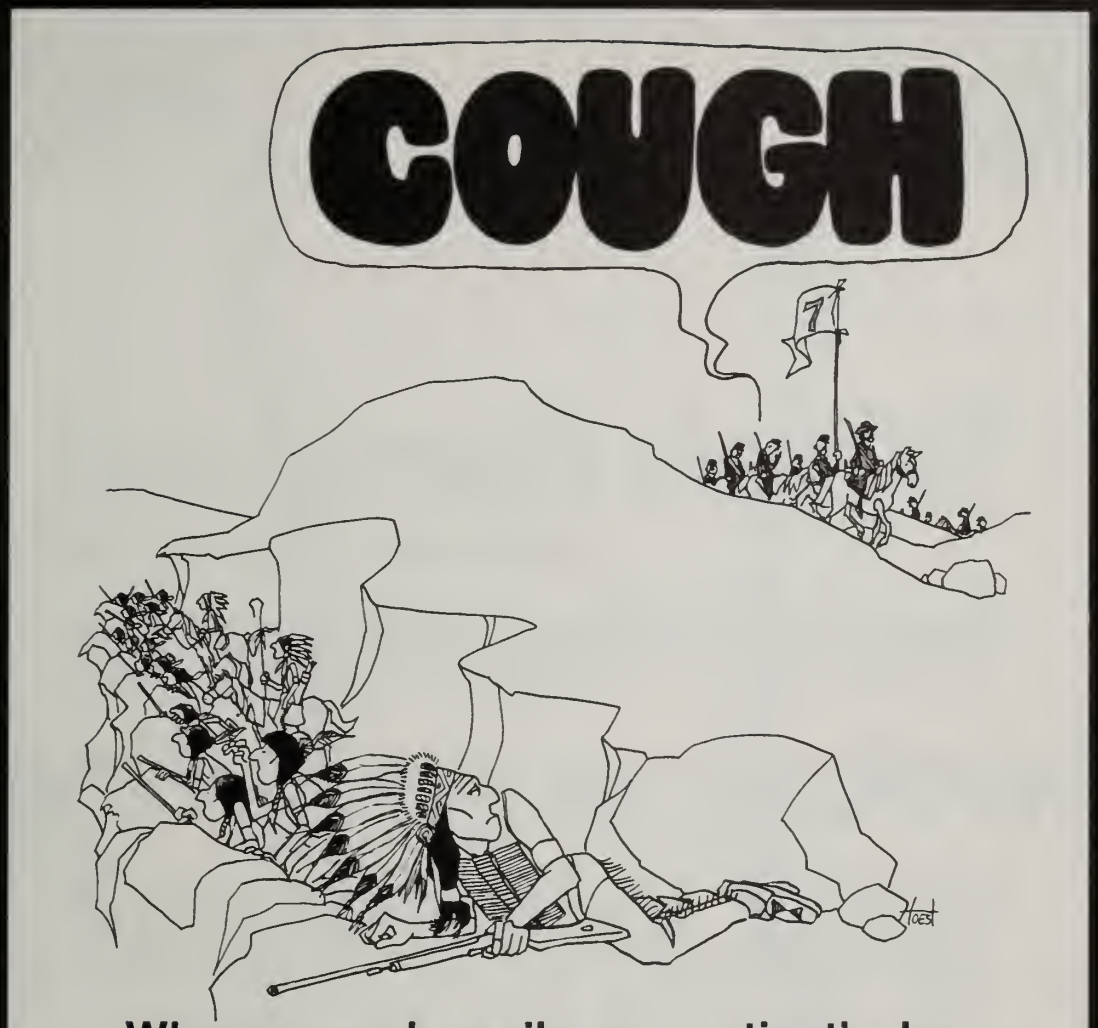
addendum

MSD
MERCK SHARP DOHME

"Required Reading" For Your Hypertensive Patients

Because of the importance of patient motivation, Merck Sharp & Dohme offers "High Blood Pressure," a concise, pocket-sized booklet that defines the patient's own role in the management of hypertension. This booklet is available for you to give to your patients. It is designed to reinforce your explanation of hypertension and it emphasizes the importance of patient understanding in adhering to the regimen you prescribe.

Please ask your Merck Sharp & Dohme Professional Representative or write Professional Service Department, West Point, Pa. 19486 for a supply of this booklet.



When a cough spoils your patient's day...

Triaminic® Expectorant

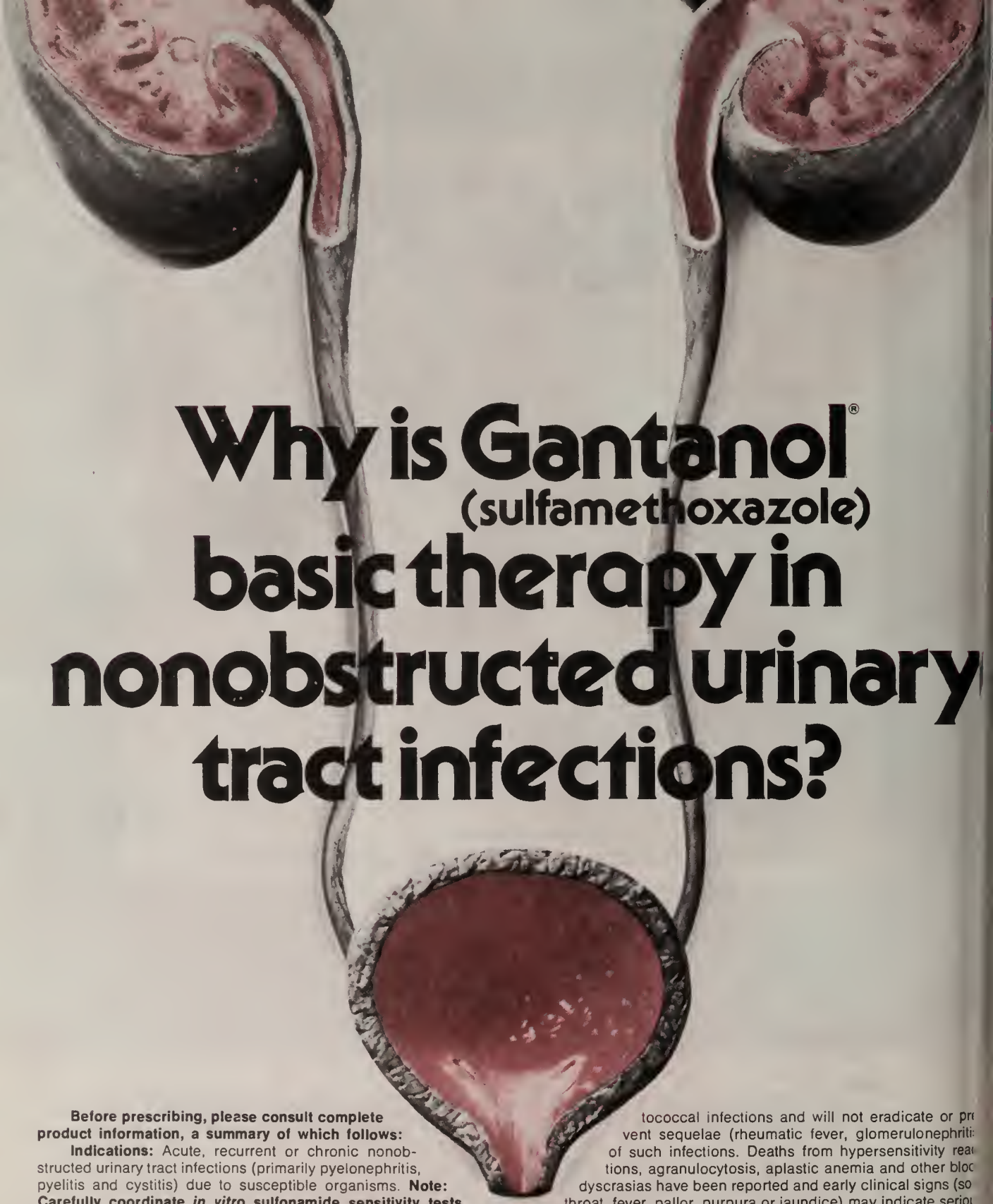
Each teaspoonful (5 ml.) contains:

Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg.; pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.); glyceryl guaiacolate, 100 mg.; alcohol, 5%.

Available in 8-oz. Family Size and 4-oz.
No Rx needed—recommend over the phone.

The Adult Expectorant that is great for kids, too.

Dorsey Laboratories/Division of Sandoz-Wander, Inc./Lincoln, Nebraska 68501



Why is Gantanol® (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or pre vent sequelae (rheumatic fever, glomerulonephriti of such infections. Deaths from hypersensitivity rea tions, agranulocytosis, aplastic anemia and other bloo dyscrasias have been reported and early clinical signs (so throat, fever, pallor, purpura or jaundice) may indicate seriou blood disorders. Frequent CBC and urinalysis with microscop examination are recommended during sulfonamide therapy. Insuf cient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal hepatic function, severe allergy, bronchial asthma; in glucose- phosphate dehydrogenase-deficient individuals in whom dos related hemolysis may occur. Maintain adequate fluid intake prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, apla tic anemia, thrombocytopenia, leukopenia, hemolytic anemia, pu

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy

Gantanol®

(sulfamethoxazole)

Tablets/Suspension (0.5 Gm) (0.5 Gm/teasp.)

pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

WE DIDN'T EARN SO MUCH TRUST BY CHANCE.

We know there are investments that can pay off with big returns. If you're ready to take big risks, as well.

Frankly, they're not for us.

At Virginia National's Trust Department, we take our name very seriously. We know many of our accounts represent a lifetime of work. So we seek prudent investments, reasonable returns—the kind that build an adequate pattern of growth for our clients.

And with that sensible approach, we've grown to be one of the largest and most experienced trust departments in Virginia.

But don't think words like prudent and sensible are synonyms for slow and stodgy.

We work hard finding the right investments and offer some amazing flexibility in designing plans.

So whether you're interested in personal estate analysis, living trusts, or investing funds for pension and profit-sharing, why not discuss it with us. No high-rolling promises. Just people you can be sure of.

VNB TRUST DEPARTMENT.

VIRGINIA NATIONAL BANK
Member FDIC

The Rx that says "Relax"

BUTISOL Sodium provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol C III SODIUM®
(SODIUM BUTABARBITAL)

Contraindications: Sensitivity or idiosyncracy to barbiturates; history of manifest or latent porphyria or marked liver impairment; respiratory disease with dyspnea or obstruction; history of addiction to sedative/hypnotic drugs; uncontrolled pain, to avoid because of possible excitement.
Precautions: Exercise caution in: moderate to severe hepatic disease; anticoagulant therapy, because of possible increased metabolism of coumarin anticoagulants; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects.
Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in those with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
Available as: Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL
McNeil Laboratories, Inc., Fort Washington, Pa. 19034

© McN 1971

DARVON®
COMPOUND-65
65 mg. propoxyphene hydrochloride, 227 mg aspirin, 162 mg. phenacetin, and 32.4 mg caffeine
Darvocet-N® 100
100 mg. propoxyphene napsylate
and 650 mg. acetaminophen
Lilly
Additional information available to the profession on request.
Eli Lilly and Company • Indianapolis, Indiana 46206
400760

The Virginia
MEDICAL MONTHLY

November, 1974
Vol. 101, No. 11
Whole No. 1470

Guest Editorial . . . .

Pulmonary Rehabilitation—A Hope for the Breathless

CHRONIC OBSTRUCTIVE LUNG DISEASE (COLD) is an ever increasing health problem. There are estimated to be between five and fifteen million sufferers in the United States. COLD ranks second only to heart disease as a cause of Social Security disability payments, and the prospects are even more as annual sales of cigarettes continue to rise.

In the last decade several significant medical advances have enabled us to prolong the lives of persons with COLD. Respiratory Intensive Care Units with their ever increasing technological developments are capable of supporting these patients over several episodes of acute respiratory failure. Newer antibiotics such as Gentamicin and Carbenicillin now permit the eradication of once fatally resistant gram negative infections.

For the patient with COLD and his family these advances have been a mixed blessing, the end result of which is a patient, returned from the brink of death, who must sit in his bed breathlessly awaiting his next infection. Who is to say that we, like many of these patients faced with such prospects, would not wish that the end would come?

This bitter sequence of events need not happen. There are methods by which quality as well as quantity of life may be given to the patient with COLD. Recently in Richmond, two programs—one now in operation, one soon to be opened, have faced the task of rehabilitating the patient who is a pulmonary cripple.

What is the basis behind such rehabilitation programs? Although physical reconditioning to enable greater mobility is the heart of every program, patient and family education, home inhalation therapy services, social work assistance, mental hygiene, and physical therapy treatment programs are integral facets of the entire program.

Dr. Kleinholz is Director of Pulmonary Laboratories of the Retreat Hospital, Richmond.

These programs are designed to work with the patient and his private physician as shown in the diagram.

Physical reconditioning is accomplished by exercise programs incorporating walking and/or bicycle riding. The physiological basis of this program is to decrease the oxygen consumption of muscle by conditioning as is done in athletic training. Studies in Denver have shown that despite progression of disease as measured by spirometry, the patients are able to perform essentially the same tasks over a three year period.[1]

PULMONARY REHABILITATION PROGRAM

In addition to reconditioning, vigorous therapy of any reversible element of airways obstruction is carried out including the use of home inhalation therapy. Abdominal breathing, postural drainage and cupping are also utilized. In order to support these aspects of the program in the home, the services of visiting nurses, physical therapists, and inhalation therapists are necessary.

Since many of the patients are unable to work, social work services are necessary to enable them to obtain all the governmental assistance due them.

Who should enter these programs? Basically, anyone with chronic lung disease who is short of breath on performing normal daily activities. Hopefully, patients will enter the programs earlier in the course of their disease, while still working, and thus perhaps their active working years can be prolonged. Nevertheless, at whatever stage patients with COLD enter and continue in these programs, they will demonstrate objective improvement in their physical capabilities as well as a general sense of well being.

The programs in Richmond are: The Richmond Lung Association, Memorial Hospital Program conducted at the Richmond Memorial Hospital, and The Wirt Hatcher Memorial Cardiopulmonary Rehabilitation Program soon to open under the auspices of the Retreat Hospital.

Emil J. Kleinholz, Jr., M.D.

References

1. Neff, Thomas A. and Petty, Thomas L.: Outpatient Care for Patients with Chronic Airway Obstruction–Emphysema and Bronchitis. Chest, 60: page 11S, 1971.

2621 Grove Avenue
Richmond, Virginia 23220

What is a Good Hypertensive Workup? Who Needs It?

A. JARRELL RAPER, M.D.
Richmond, Virginia

These two papers deal with the timely problem of hypertension, its outpatient treatment and the adequate diagnostic work-up. The subject is well presented.

HYPERTENSION is receiving much attention, and we can expect to be increasingly concerned with its management in the future. This is because of the large number (12-21 percent) of Americans with hypertension,[1] and because recent well planned studies have shown clear patient benefit (reduced morbidity and mortality) from treatment of hypertension.[2] The evaluation received by hypertensive patients varies widely, depending upon office setting, geographical location, professional and patient interest, and financial factors. It is probable that many patients are not adequately evaluated while others undergo inappropriately elaborate evaluation. One useful way to approach the "hypertensive workup" is to review the questions the evaluation is to answer, practical down-to-earth questions whose answers decide the patient's management. A "good hypertensive workup" should, therefore, answer these questions:

1. *What is the blood pressure?*

Due to observer error, blood pressure variability, and the natural tendency for new patients to be on edge ("orienting reflex") the first reading should not be accepted, in the absence of an emergency condition.[1] The patient should be allowed to get used to the new situation, and should be nearly alone and quiet for a few minutes. No universal definition of hypertension has as yet been widely agreed upon. Here at MCV, we have agreed upon these (temporary) definitions of "hypertension", of "sustained hypertension", of "transient hypertension", and of "treatable hypertension" (Fig. 1). Seated diastolic blood pressure is our guideline because the large outpatient studies[2] use this as a guide for therapy and because it is at least a very rough "average" of 24-hour pressure (standing, seated, lying down).

2. *Has the hypertension damaged the patient?*

Figure 2 outlines the various complications of hypertension, and the means of discovering the complications. In summary, patients need history, physical examination, chest x-ray, electrocardiogram, and a few simple laboratory tests in order to detect hypertensive damage.

3. *Is the accelerated (malignant) phase of hypertension present?*

This acutely progressive condition is fortunately not common, but its recognition and prompt firm management will save patients from irreversible renal damage and death. The basic vascular lesion is fibrinoid arteriolar necrosis, manifest clinically by Grade III or Grade IV ocular fundal changes (flame-shaped hemorrhages, fluffy exudates, papilledema), hypertensive encephalopathy, and/or microscopic or gross hematuria. These may all occur together, or separated by a time period.

From the Department of Medicine, Medical College of Virginia, Virginia Commonwealth University, Richmond, Virginia.

Presented to The Medical Society of Virginia October 20, 1973, Norfolk.

4. *Will the patient undergo surgery if a technically correctable probable cause for the hypertension is found?*

HYPERTENSION - seated diastolic blood pressure greater than 95 mm Hg in either arm. Use phase V (disappearance of Karatkoff sounds), if IV and V differ by 4 mm, record both.

SUSTAINED HYPERTENSION - seated blood pressure greater than 95 mm Hg diastolic on three outpatient occasions out of four at least one week apart. The pressures used may include the "screening" (or initial) pressure.

TRANSIENT HYPERTENSION - any seated blood pressure greater than 95 mm Hg diastolic. People with transient hypertension should be treated only if appropriate, or scheduled for return appointment for B.P. check in six months.

TREATABLE HYPERTENSION - that hypertension which in the judgment of the physician carries, untreated, a greater risk than that of treatment. Near universal agreement now exists that seated diastolic B.P. greater than 104 mm Hg (sustained) requires treatment in males, perhaps females too; and that greater than 95 mm Hg diastolic (sustained) requires treatment if evidence of cardiovascular damage is present (Grade II, III, or IV fundi, left ventricular hypertrophy, evidence of cardiac decompensation, evidence of coronary artery disease). Impaired renal function, proteinuria, or hematuria are not ordinarily the result of modest elevation of blood pressure. Intermittent hypertension should probably also be treated if there is any detectable cardiovascular damage reasonably attributable to the blood pressure or if documented acute rises seem dangerous.

Fig. 1. Definitions of types of hypertension, as used at the Medical College of Virginia. Seated diastolic blood pressure is used.

The approach to this question varies with the condition found, and is a decision best made with all the appropriate information at hand. At times, special studies will be needed. The guideline during investigation should be "will the patient be operated upon if the condition we are searching for is found"?

In *renal parenchymal disease*, surgery will probably not be employed. Not only is the lesion likely to be diffuse, but the only techniques that might help involve loss of renal tissue (partial, unilateral, or bilateral nephrectomy).

In certain types of *renovascular hypertension* such as renal artery stenosis, reconstructive surgery will be the best course in the young severely hypertensive female—she may well have fibromuscular dysplasia (a non-atherosclerotic cause of stenosis). Renal arteriograms and estimations of renal vein renin levels will be needed. Cure or amelioration of the hypertension will usually follow successful surgery.[3]

In males, and at more advanced ages, atherosclerosis is usually at fault and surgery becomes less attractive, especially if renal function is normal and the hypertension can be medically controlled. Thus, an initial careful trial of antihypertensive therapy is often reasonable before elaborate study is undertaken.

We have been disappointed here that so few "hypertensive intravenous pyelograms" show useful positive results. Ayers, et al,[6] have analyzed 357 consecutive hypertensive I.V.P.'s. Of the 10 "positive" studies, only three had "functionally significant" stenosis. Of these three, one obtained good control after a nephrectomy, one refused surgery, and one had other medical problems making surgery im-

practical. The "yield" from hypertensive I.V.P.'s was thus disappointingly low. If you highly suspect a renal artery lesion (to be probably corrected if found), it may be better to go ahead and get a bilateral renal arteriogram, with appropriate filming for renal size and dye dynamics.

HEART

1. Left ventricular or combined L and R ventricular heart failure - physical examination, history.
2. Enlargement of left ventricle - physical examination, chest x-ray.
3. Left ventricular hypertrophy - electrocardiogram (EKG).
4. Angina pectoris - history.
5. Myocardial infarction - history, EKG

BRAIN

1. Stroke - history, physical examination, (type of stroke has relevance).
2. Hypertensive encephalopathy - history, physical examination, clinical course.

OCULAR FUNDI

1. Chronic changes (narrowing, copper wiring, AV nicking).
2. Acute changes (hemorrhages, exudates, papilledema).

KIDNEYS

1. Azotemia - BUN or creatinine (creatinine best) to estimate glomerular filtration rate - clinical laboratory.
2. Hematuria - Urine microscopic for hematuria.
3. Proteinuria - urinalysis.

Fig. 2. Complications of hypertension, and the means needed to discover them.

Urethral obstruction, ureteral obstruction, and coarction of the aorta will certainly be corrected surgically and should be watched for.

Pheochromocytoma should be surgically removed. Not only does this catecholamine-producing tumor lead to erratic and refractory hypertension, but 15 percent of these tumors eventually become malignant. Ayers has evaluated 1,177 consecutive determinations of 24-hour urinary excretion of catecholamines,[6] the best test to detect this tumor. Seven tumors were found. In terms of economics, this risk-free test cost $2,520 for each tumor found, which seems worthwhile both to doctor and patient. Thus we believe that all patients with significant hypertension should have at least one determination; those with suggestive features (hypermetabolism, erratic pressure, orthostatic hypotension, "spells") more than one.

Patients with *hyperaldosteronism* and *Cushing's Syndrome* may or may not undergo surgery, depending upon pressure readings, response to therapy, and clinical setting. Hypokalemia serves as a good "screen" for these problems. Special hormone and renin studies, with known sodium intake, may be needed here.

It has been suggested that plasma renin measurement may define a "low-risk" subgroup (low renin hypertension) in whom drug treatment is not important.[4] This, however, has been disputed.[5] We do not use plasma renin levels as a guide to the decision to treat or not treat. Interesting developments in this area can be expected.

In summary, we believe *all* significantly hypertensive patients should have:

History and physical examination
Serum BUN or creatinine, blood hematocrit
Serum electrolytes off diuretics (regular diet)
Urinalysis
24-hour urine collection for catecholamines
Electrocardiogram
Chest x-ray

Some patients should have:

Intravenous pyelogram
Renal artery arteriogram
Urine aldosterone excretion rate (known sodium intake or output)
Renal vein and peripheral renin levels (known sodium excretion, known posture)

References

1. Wood, E. J.: Guidelines for the detection, diagnosis, and management of hypertensive populations. Circulation 44:A-263, 1971.
2. Freis, E. D. and the VA Cooperative Study Group: Effects of treatment on morbidity in hypertension. JAMA 213:1143, 1970.
3. Vidt, D. G. and Gifford, R. W., Jr.: Reversible renal hypertension. Cardiovascular Clinics 1:132, 1969.

4. Laragh, J. H., et al: Renin, angiotensin, and aldosterone system in pathogenesis and management of hypertensive vascular disease. Am. J. Med. 52:633, 1972.
5. Mroczek, W. J., Finnerty, F. A., and Catt, K. J.: Lack of association between plasma renin and history of heart attack or stroke in patients with essential hypertension. Lancet 1 September, 1973.
6. Ayers, C. R., Slaughter, A. R., Smallwood, H. D., Taylor, F. E., and Weitzman, R. E.: Standards for quality care of hypertensive patients in office and hospital practice. Am. J. Cardiol. 32:533, 1973.

Medical College of Virginia
Richmond, Virginia 23298

Practical Office Management of Chronic Hypertension

A. JARRELL RAPER, M.D.
Richmond, Virginia

THE THERAPEUTIC AIM of office management of chronic hypertension is reduction of supine or seated diastolic blood pressure to or below normal without production of uncomfortable or disabling symptoms. Normalization of supine pressure is most desirable; normalization of seated pressure is accepted if necessary. This tests the staying power of doctor and patient alike as lifetime therapy is usually needed.

The relationship of the doctor and his patient is of paramount importance as the patient must usually adhere to pill-taking indefinitely. The patient should be educated to understand that the blood pressure can almost always be controlled and that the rewards of successful control are reduced illness and longer life span. The patient should usually be taught the names of his medicines, what their chief ill effects are, and what strengths he is taking. His bottles should be labeled.

Antihypertensive Programs

In general, the simpler the program that suffices, the better. If a grossly obese person can be induced to lose 20 percent in body weight, mild hypertension may clear up. A few folk are cultural "salt eaters" (15-20 grams per 24 hours); control of this tendency (infrequently) brings the pressure down.

When drug therapy is needed (as it usually is), a variety of drugs can be employed. What follows is an attempt to divide patients into severity categories, so as to begin each patient initially on the program he will eventually need. (Fig. 1).

Fortunately, for our patients, and for we

MILDEST HYPERTENSION - Diastolic 100 mm Hg
Diuretic - thiazide is best - HCT 50 mg/day or b.i.d.

MODERATELY HYPERTENSIVE - Diastolic 110 mm Hg
Reserpine 0.1-0.2 mg/day
Thiazide daily or b.i.d.
Add hydralazine 25-50 mg t.i.d. if needed

MODERATELY SEVERE - Diastolic 120 mm Hg
Methyldopa 250 mg b.i.d. and up
Thiazide daily or b.i.d.
Hydralazine 25-50 mg t.i.d. if needed

SEVERELY HYPERTENSIVE - Diastolic 130 mm Hg
Thiazide daily
Guanethidine 25 mg (or much more) q.a.m.
(titrate individual dose by B.P. response)
(Later perhaps add hydralazine)

Figure 1

From the Department of Medicine, Medical College of Virginia, Virginia Commonwealth University.

Presented to The Medical Society of Virginia October 20, 1973, Norfolk.

physicians, most patients fall within the first two categories (*mild or moderate hypertension*) and are usually quite simple to manage, with infrequent office visits after a stable program is under way.

All of the thiazide diuretics possess antihypertensive effects, over and beyond their (usually temporary) dehydrating effects, and this drug alone suffices for many mild patients.[1] Choice of a specific thiazide agent depends upon duration desired and convenience. A rise in serum uric acid often occurs, but may be ignored unless gouty arthritis or very high elevation (>15mg%) occurs. Impaired glucose tolerance has been noted, but true diabetes has not been induced. Potassium depletion may be ignored unless severe, or symptomatic (muscular weakness), or unless the patient is on digitalis glycosides.[2] Other diuretics have some hypotensive action, which is weaker than that of the various thiazides.

Reserpine in small doses (0.1 mg to 0.2 mg per day) may be added if needed for the moderately hypertensive. It adds greatly to the hypotensive effect of thiazide alone.[3] At this dosage level complications are very rare and patients tolerate the drug well. We are careful not to use reserpine in those with known peptic ulceration or mental depression. Six weeks is needed to judge the antihypertensive effect.

Hydralazine (Apresoline) may be further added if necessary. This drug has reasonable antihypertensive action, with few side effects.[3] It is a direct arterial and arteriolar vasodilator. An occasional patient will suffer throbbing headaches, and we try not to give the drug to those with angina pectoris as a few are made worse. Hydralazine suffers in reputation from (earlier) cases of a lupus-like syndrome induced by larger doses of the drug than currently recommended.

Moderately severe hypertension (diastolic 120 mm Hg) often requires methyldopa (Aldomet) for control, in place of the reserpine. Hydralazine and thiazide are used in addition. Methyldopa appears to have a stronger effect, and because of its short action, rapid adjustments in effective level are feasible.[4] Standing pressure is lowered more than is supine, but this orthostatic effect is not as severe as seen with guanethidine.[5] Drowsiness and fatigue early in therapy have infrequently been troublesome. Fever, hemolytic anemia, and liver chemistry changes are rare but more severe side reactions.

Severely hypertensive (diastolic 130 mm Hg) patients usually require guanethidine (Ismelin), our most potent, but most troublesome drug. The drug works by interfering with postganglionic sympathetic transmission. Cardiac output is lowered and postural blood pressure responses are blunted. The dose for control is quite variable from patient to patient (25-300 mg daily), and the action prolonged (5-7 days), so that repeat visits are needed as the patient is "titrated upward" from the starting dose of 25 mg. Eventually the pressure will come under control (seated diastolic pressure), unless intolerable side effects occur first. These are most often orthostatic hypotension (syncope is a danger), diarrhea (diphenoxylate [Lomotil] helps), or failure of ejaculation and impotence. A thiazide drug will decrease the amount of guanethidine needed; use with methyldopa will allow for quick "titration" and for heaviest dosage during the afternoon, when pressures tend to be highest. Since hydralazine acts in a different manner, it may be added. The goal is normalization of blood pressure in the patient without causing disabling side effects, a goal often reachable in severe cases only after repeated adjustments. Yet, it is in these severe cases that the patient stands to gain the most from his program.

Drug Combinations

As can be seen from the above, more than one drug is commonly used. Combination preparations, of which there are many, are attractive because of price and simplicity, which help the patient adhere to his program. Significant problems can occur, however, if they are misused. For example, a commonly used combination contains in each tablet:

reserpine 0.1 mg
hydralazine 25 mg
hydrochlorothiazide 15 mg

If the pill is given seldom enough to avoid trouble from the reserpine (b.i.d.), inadequate hydralazine (50 mg per day) will be given. If adequate thiazide is the goal, too much reserpine will be given (0.4-0.6 mg/day).

Thus, the best way to use combinations is to *first* establish the patient's needs with individually prescribed drugs, and then to switch to a combination if one is available that fits the patient's needs.

Vasodilator-Beta Blockade-Diuretic Therapy

A few severe patients do not respond to standard measures or unavoidable side reactions prevent control. These patients are candidates for a different type of program. A potent vasodilator alone, if powerful enough, would lower the pressure. However, reflex tachycardia and fluid retention occur as unwanted side effects. The reflex tachycardia (a beta sympathetic action) can be blocked pharmacologically, and a diuretic can be used to prevent fluid retention. We have used this program for such patients:

1. Vasodilator
   Hydralazine (Apresoline) 25-50 mg t.i.d.
2. Beta blockade
   Propranolol (Inderal) 80-240 mg daily, in divided doses.
3. Diuretic
   Hydrochlorothiazide 50 mg b.i.d.

Propranolol is potent therapy, and care must be taken in patients with cardiac disease, rhythm disturbances, or asthma. Hydralazine is not as powerful a vasodilator as is minoxidil. The latter is, however, still in an investigational stage, and not yet available for general use.

Summary

1. Patient education is very important.
2. Patient motivation and a strong doctor-patient relationship are needed. The interest shown by his physician will often be the deciding factor in patient adherence.
3. Very simple therapy suffices for most patients.
4. Control is possible even in most severe patients, but considerable individualization and frequent visits will be necessary.

References

1. Conway, E. H. and Lauwers, P.: Hemodynamic and hypotensive effects of long-term therapy with chlorothiazide. Circulation 21:21, 1960.
2. Hartmann, F. and Heimsoth, V.: Disturbances in carbohydrate and uric acid metabolism during diuretic treatment in Gross, F. (Ed.): Antihypertensive Therapy. Springer-Verlag, New York, 1966.
3. Freis, E. D. and the VA Cooperative Study Group: Effects of treatment on morbidity in hypertension. JAMA 213:1143, 1970.
4. Maxwell, M. H.: Methyldopa in the management of uncomplicated hypertension in Gifford, R. (Ed.): Methyldopa in the Management of Hypertension. Merck, Sharp and Dohme, West Point, PA, 1972.
5. Richardson, D. W., Wyso, E. M., Magee, J. H., and Cavell, R. C.: Circulatory effects of guanethidine. Circulation 22:184, 1960.

Medical College of Virginia
Virginia Commonwealth University
Richmond, Virginia 23298

New Normal Ranges for the Radioiodine Uptake in Tidewater Virginia

P. M. FITZER, M.D.
Newport News, Virginia

New lower values are presented. Reasons for the lowering trend are discussed.

THE THYROIDAL UPTAKE OF RADIOIODINE is a sensitive, widely used index of thyroid gland function. Recent reports have noted considerable geographic variation in dietary iodine uptake, and the need to re-evaluate regional norms for thyroidal radioiodine uptake has been emphasized.[1-5] This paper presents the current radioiodine uptake distribution for a population in the Tidewater area of Virginia.

Methods

In our Laboratory of Nuclear Medicine at Riverside Hospital, uptakes are performed at 24 hours, utilizing Na131I in capsule form. For uptake only, 5-20 uCi are given; an occasional uptake with scan is done with approximately 50 uCi (intravenous 99mTc is used for routine thyroid scanning). A standard uptake technique is used.[6]

A group of 98 consecutive patients referred to our laboratory for thyroid evaluation during April and May of 1973 were included in this study. This typical group was quite heterogeneous, and no attempt was made to sort the patients as to thyroid status on a clinical basis. Rather, each patient had a T3 uptake (Res-O-Mat T3 I125 kit, Mallinckrodt Nuclear) and a T4 by Murphy-Pattee (Res-O-Mat T4 I125 kit, Mallinckrodt Nuclear). Patients were grouped as hypothyroid, euthyroid, or hyperthyroid utilizing the calculated free-thyroxine index.[7] Admittedly, the 98 included patients may not represent the theoretical "normal" population, since some suspicion of thyroid disease must have resulted in their referral. However, all recent studies have utilized hospital or outpatient populations of one sort or another, and this alone must introduce a bias. So far, studies utilizing only a "man on the street" population have not appeared.

FITZER, P. M., M.D., *Director, Laboratory of Nuclear Medicine, Department of Radiology, Riverside Hospital.*

Results

The histogram of Fig. 1 shows the distribution of 24 hour uptakes of the 98 patients. The mean value of 88 euthyroid patients by T7 is 12.8%, with a range of 3-45%. The four hypothyroid patients showed a mean of 11.3%, ranging from 8-15%. The hyperthyroid mean uptake was 43.2%, with a range of 14-58%, for six patients.

Discussion

Older textbooks quote a normal radioiodine uptake range at 24 hours of 15-45%. Recent values for the normal 24 hour uptake in several geographic regions are given in Table 1. Our value of 12.8% is in general agreement, although somewhat lower. It has been pointed out that most, if not all, radioiodine uptake distributions are skewed, and not statistically normal. Therefore, the standard deviation of the mean may not properly be applied.[4] Other reports have set arbitrary upper and lower limits of normal, which best distinguish most

TABLE I

GROUP	LOCATION	Year of Study	Mean 24-Hour Uptake (Percent)	"Arbitrary" Range (Percent)	Observed Range (Percent)
Pittman et al[2]	Birmingham, Alabama	1968–69	15.4	.....	5–35
Bernard et al[3]	Stockton, California	1969	15.6	11–25	6–28
Harvey et al[4]	Lackland, Texas	1970	17.4	5–31	0.8–63.5
Alazraki et al[5]	San Diego, California	1967–72	19.0	.....	4–49

euthyroid patients from most hypothyroid and hyperthyroid patients (Table 1). We have arbitrarily set our normal range at 5-33%.

This range will exclude almost all hyperthyroid patients (Fig. 1). There is overlap, however, between the uptake distribution of the normal and hypothyroid groups. This may be due to the small number of hypothyroid patients sampled, but the geographic situation of Tidewater Virginia, bordering both on the Chesapeake Bay and the Atlantic, may be responsible. The uptake of radioiodine is reciprocally related to the daily iodide intake. Thus in areas low in available ingestible iodide, such as interior Mexico or Venezuela, the normal 24 hour uptake may be high.[8,9] On the other hand, low uptake values may be seen in areas of the earth's crust rich in ingestible iodide, such as coastal Japan or Iceland.[10,11] Tidewater Virginia shares many dietary and geographic traits with coastal Japan and Iceland, including a propensity for seafood. Therefore, a large daily intake of iodide in Tidewater could blur the dividing line between hypothyroid and euthyroid uptake values. Similarly, the somewhat lower mean 24 hour uptake value of 12.8% as compared with more interior populations could be explained.

The generalized lowering of 24 hour uptake values in the United States over the past years is apparently due to increases in dietary iodide levels. It has been shown that this is due at least in part to massive amounts of iodates employed in the baking of bread, a universal staple food.[2] Small increases in dietary iodide have induced thyrotoxicosis in certain groups with endemic goter, but the risk of this in groups without endemic goiter seems "unlikely".[12,13]

Conclusion

The new mean value for the normal 24 hour radioiodine uptake in Tidewater Virginia, is 12.8%. The euthyroid range is set at 5-33%. Reasons for the overlap of the hypothyroid and euthyroid values are discussed.

ACKNOWLEDGMENTS: Appreciation is expressed to technologists Mrs. P. Dmoch and Ms. S. Smoot, to Pathologists Drs. F. Davis, Jr., and W. Helwig for performing the in vitro studies, and to Mrs. P. Kornegay for secretarial assistance. Thanks also to Ms. Beverly Wyke for Fig. 1.

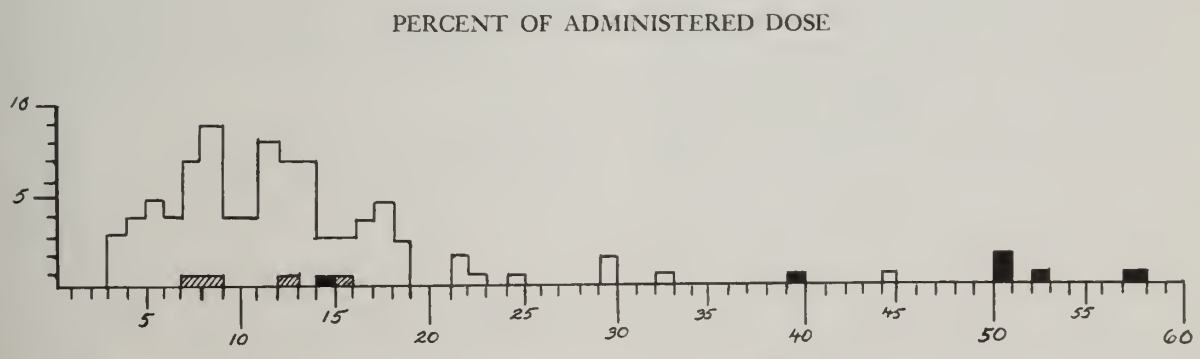


Fig. 1. Distribution of 24 hour radioiodine uptakes for euthyroid, hypothyroid (cross-hatched), and hyperthyroid (solid) patients.

Addendum

Additional series of new radioiodine uptakes have been reported for populations in Illinois, New Mexico, Oklahoma, Washington, Wisconsin, Australia, and England.[14-20] All have noted a significant lowering of 24 hour uptake values. Several reports show a great variation in the iodine content of bread from different bakers, even within the same city.[16,21]

References

1. Oddie, T. H. et al: Geographic Variation of Radioiodine Uptake in Euthyroid Subjects. J. Clin. Endocrinol. & Metab. 28: 761-775, 1968.
2. Pittman, J. A. Jr., Dailey, G. E., III, Beschi, R. J.: Changing Normal Values for Thyroidal Radioiodine Uptake. New Eng. J. M. 280:1431-1434, 1969.
3. Bernard, J. D., McDonald, R. A., Nesmith, J. A.: New Normal Ranges for the Radioiodine Uptake Study. J. Nucl. Med. 11:449-451, 1970.
4. Harvey, W. C., Kopp, D. T., Bovie, W. W.: Further Observations on the Normal Radioactive Iodine Uptake. J. Nucl. M. 13:548-550, 1972.
5. Alazraki, N. P., Halpern, S. E., Ashburn, W. L.: A Re-evaluation of 131I Thyroid Uptakes. Radiology 105:611-614, 1972.
6. Freeman, L. M., Blaufox, M. D.: Nuclear Medicine—a summary of current techniques. In Physicians Desk Reference for Radiology and Nuclear Medicine. Medical Economics Company, Oradell, N.J., 1973, pp. 3-5.
7. Anderson, B. G.: Free Thyroxine in Serum in Relation to Thyroid Function. JAMA 203:135-140, 1968.
8. Maisterrena, J. A., Tovar, E., Chavez, A.: Endemic Goiter in Mexico and its Changing Pattern in Rural Countries. In Endemic Goiter in Latin America. Symposium of the Third Meeting of the Scientific Group on Research in Endemic Goiter of PAHO, June 27-29, 1968, Puebla, Mexico. Edited by J. B. Stanbury, Geneva, World Health Organization, 1970.
9. Roche, M.: Elevated Thyroidal 131I Uptake in the Absence of Goiter in Isolated Venezuelan Indians. J. Clin. Endocrinol. & Metab. 19:1440-1445, 1959.
10. Suzuki, H. et al: Endemic Coast Goiter in Hokkaido, Japan. Acta Endocrinol. 50: 161-176, 1965.
11. Bluhm, M. M., Gundmundsson, T. V.: Routine Radioiodine Function Test in Iceland. Scottish M.J. 8:442-445, 1963.
12. Vidor, G. et al: Studies of Thyrotoxicosis in Tasmania. Australasian Ann. Med. 17: 162, 1968.
13. Stanbury, J. B.: The Changing Iodide-Uptake Test. New Eng. J.M. 280:1474-1475, 1969.
14. Ghahremani, G. G. et al: New Normal Values for Thyroid Uptake of Radioactive Iodine. JAMA 217: 337-339, 1971.
15. McMahon, J. E., Shoop, J. D.: I-131 Uptake. Rocky Mt. M. J. 70:39-41, 1973.
16. Kauth, J. E. et al: Normal Values for the Radioactive Iodine Uptake and the In Vitro Thyroid Studies in Eastern Oklahoma. J. Okla. State M. Assoc. 65:10-12, 1972.
17. Brewer, G. F., Griep, R. J.: New Normal Values for Thyroid Radioactive Iodine Uptake. Northwest Med. 70:685-688, 1971.
18. Caplan, R. H., Kujak, R.: Thyroid Uptake of Radioactive Iodine. JAMA 215:916-918, 1971.
19. Myhill, J., Hales, I. B., Radcliff, F. J.: Uptake of Radioiodine by the Thyroid. M. J. Australia 1:222-223, 1972.
20. Keeling, D. H., Williams, E. S.: Changes in the Normal Range of Thyroidal Radioiodine Uptake. J. Clin. Path. 25:863-866, 1972.
21. Sachs, B. A. et al: Bread Iodine Content and Thyroid Radioiodine Uptake: a Tale of Two Cities. British M. J. 1:79-81, 1972.

---

501 Riverside Drive
Newport News, Virginia 23606

Continuous Electrocardiographic Monitoring in Acute Respiratory Failure

EMIL J. KLEINHOLZ, JR., M.D.
MICHELE ROMANO, R.N.
Richmond, Virginia

Continuous electrocardiographic monitoring of 16 patients with 18 admissions to the Intensive Care Unit due to acute respiratory failure revealed a striking incidence of cardiac arrhythmias. Evaluation of arterial blood gasses in relationship to major cardiac arrhythmias showed that respiratory acidosis was attended by a significant increase in major cardiac arrhythmias. There was, however, no relationship demonstrated between hypoxemia or alterations in arterial pH with major cardiac arrhythmias.

ALTHOUGH there has long been clinical speculation that chronic obstructive pulmonary disease is attended by an increased risk of cardiac arrhythmias, there have been few studies on this subject.[1,2] No studies of continuous electrocardiographic monitoring during acute respiratory failure have been reported and, in fact, electrocardiographic monitoring of patients with acute respiratory failure is not commonly carried out.

KLEINHOLZ, EMIL J., JR., M.D., *Director Pulmonary Laboratories, Retreat Hospital.*

ROMANO, MICHELE, R.N., *Supervisor, Intensive Care Unit, Retreat Hospital.*

We present here a study of 16 patients who had continuous electrocardiographic monitoring during 18 admissions to the Intensive Care Unit of the Retreat Hospital, Richmond, for acute respiratory failure.

Materials and Methods

The records of 16 patients admitted 18 times to the Intensive Care Unit with a diagnosis of acute respiratory failure during the period of October 1972 to July 1973 were reviewed. EKG monitoring was carried out on all patients during their stay in the Intensive Care Unit.

Arrhythmias were documented by rhythm strips, nurse's notes, and physician's progress notes. It is a matter of unit policy that rhythm strips are placed on each chart at the change of nursing shift and when there is significant change in rhythm.

Minor arrhythmias were considered to be: sinus arrhythmia, wandering atrial pacemaker, sinus tachycardia, occasional atrial premature contractions (less than six per minute), occasional premature junctional contractions (less than six per minute), and ocasional premature ventricular contractions (less than six per minute), and first degree atrioventricular block.

Major cardiac arrhythmias were the following: frequent premature atrial contractions (greater than six per minute), paroxysmal atrial tachycardia, atrial tachycardia, multifocal atrial tachycardia, atrioventricular dissociation, high grade atrioventricular block, atrial fibrillation, atrial flutter, sinue bradycardia, frequent premature junctional contractions, junctional tachycardia, frequent premature ventricular contractions, ventricular

tachycardia, sinus arrest with idioventricular rhythm, asystole and ventricular fibrillation.

Arterial blood gas analyses were reviewed in relation to arrhythmias. All arterial blood samples are drawn by the nursing staff and the date, time, and respiratory conditions are noted for each sample. Analyses were carried out on an Instrumentation Laboratories 113 Analyzer.

Hypoxemia was considered to be present when the $PaCO_2$ was 80mm Hg or less. Respiratory acidosis was considered to be present when the $PaCO_2$ was greater than 45mm Hg irrespective of the arterial pH. Acidemia was considered to be present when the pH was less than 7.35 and alkalemia when the pH was greater than 7.45.

Results

There were 15 patients with a single admission for acute respiratory failure and one patient with three admissions. Females equalled males in this series. The average age for the group was 57 years but the average age for the eight females was 66.2 years. Five patients (31%) had a preceding history of cardiac disease.

Fourteen patients (78%) had a diagnosis of chronic obstructive pulmonary disease. Five patients without preceding history of pulmonary disease and one patient with preceding chronic obstructive lung disease developed adult respiratory distress syndrome postoperatively.

Three patients were intubated and of these two later received tracheostomy. Six patients had tracheostomies primarily. Nine patients were given mechanical ventilation; three with a pressure cycled respirator and eight with a volume cycled respirator. Seven patients were treated conservatively with low flow oxygen and intermittent positive pressure breathing.

The average length of stay in the Intensive Care Unit was 11.9 days and in the hospital 24.4 days. Five patients (27.7%) died in the Intensive Care Unit.

There were 216 documented arrhythmias of which 108 were minor arrhythmias and 108 major. These occurrences are listed in Table I and Table II.

TABLE I

Minor Arrhythmias

Sinus Arrhythmia	11
Wandering Atrial Pacemaker	2
Sinus Tachycardia	56
Occasional Premature Atrial Contractions	18
Occasional Premature Nodal Contractions	3
Occasional Premature Ventricular Contractions	15
1° AV Block	3
	108

TABLE II

Major Arrhythmias

Frequent Premature Atrial Contractions	5
Paroxysymal Atrial Tachycardia	0
Atrial Tachycardia	1
Multifocal Atrial Tachycardia	17
Atrial Flutter	2
Atrial Fibrillation	20
Sinus Pause	3
Sinus Bradycardia	16
Junctional Rhythm	11
Junctional Tachycardia	3
Frequent Premature Ventricular Contractions	10
Ventricular Tachycardia	3
A-V Dissociation	4
Sinus Arrest—Idioventricular Rhythm	6
Asystole	7
Ventricular Fibrillation	0
	108

Of the 216 episodes of cardiac arrhythmia, an arterial blood gas analysis was obtained within one hour preceding or following the arrhythmia in 90 instances. In 46 of the 90 episodes the arrhythmia was minor and in 44 major.

Table III shows the relationship of major and minor cardiac arrhythmias to the presence or absence of hypoxemia. There was no statistical correlation of hypoxemia to the development of major cardiac arrhythmias (chi square 1.38).

Table IV shows that of the 46 minor arrhythmias, 31 were associated with respiratory

TABLE III

Relationship of PaO_2 to Arrhythmias

Arrhythmia	$PO_2 < 80$	$PO_2 > 80$
Minor	38	8
Major	40	4

TABLE IV

Relationship of $PaCO_2$ to Arrhythmias

Arrhythmia	$PCO_2 < 45$	$PCO_2 > 45$
Minor	15	31
Major	5	39

acidosis. Thirty-nine of the 44 episodes of major cardiac arrhythmia were associated with respiratory acidosis. A chi square analysis of this data shows that a significant relationship exists between respiratory acidosis and the occurrence of major cardiac arrhythmias ($p < .025$).

Table V shows the relationship of the presence or absence of acidemia (i.e. pH < 7.35)

TABLE V

Relationship of Acidemia to Arrhythmia

Arrhythmia	pH < 7.35	pH > 7.35
Minor	14	31
Major	17	28

to major and minor cardiac arrhythmias. There was no correlation of major cardiac arrhythmias to acidemia. Table VI shows that there was no significant correlation of alkalemia to major cardiac arrhythmias.

TABLE VI

Relationship of Alkalemia to Arrhythmia

Arrhythmia	pH < 7.45	pH > 7.45
Minor	35	10
Major	35	10

Discussion

In the present study continuous electrocardiographic monitoring of patients with acute respiratory failure revealed a high incidence of cardiac arrhythmias. Indeed, since this was a retrospective appraisal, one would expect that the true incidence of arrhythmias was much higher.

It has been speculated in the literature that pulmonary decompensation is attended by a significant incidence of major cardiac arrhythmias. Previous studies have suggested that hypoxemia and alkalemia are major determining factors in the development of serious cardiac arrhythmias in patients with acute myocardial infarction.[3] Our analysis of arterial blood gases revealed that a significant relationship existed between the presence of respiratory acidosis and major cardiac arrhythmias; however, no correlation could be identified between hypoxemia or arterial pH and major cardiac arrhythmia.

We did not examine here the results of any specific therapy relative to the cardiac arrhythmias. However, it would seem that initial treatment for these arrhythmias should be directed at improvement in the pulmonary status, and particularly decreasing the PCO_2 where possible. Further studies will be needed to delineate the efficacy of specific drug therapy (i.e. Lidocaine, Pronestyl, etc.) for the treatment of major cardiac arrhythmias associated with acute respiratory failure.

There is no doubt that there are many variables operating in the patient with acute respiratory failure which may predispose to the development of major cardiac arrhythmias.

We chose here to examine in retrospect a single set of factors, arterial blood gasses and pH, and found a significant relationship between arterial PCO_2 and major cardiac arrhythmias. Further studies are needed to identify other critical factors in the development of these arrhythmias and modes of treatment. Such a prospective study is presently in progress at our institution. The results of the current study allow us to draw the following conclusions: All patients with acute respiratory failure should have continuous electrocardiographic monitoring while in the Intensive Care Unit. Furthermore, any patient with an elevated $PaCO_2$ should have taped EKG monitoring, preferably for 24 hours, to determine whether or not major cardiac arrhythmias are occurring which require treatment.

Bibliography

1. Hudson, L. et al.: "Arrhythmias Associated with Acute Respiratory Failure in Patients with Chronic Airways Obstruction". Chest 63:661, 1973.
2. Holford, F. and Mithoeffer, T.: "Cardiac Arrhythmias in Hospitalized Patients with Chronic Obstructive Lung Disease". Am. Rev. Resp. Dis. 180, 879, 1973.
3. Ayres, S. M. and Grace, W. T.: "Inappropriate Ventilation and Hypoxemia as Causes of Cardiac Arrhythmias". Am. J. Med. 49: 495, 1969.

2621 Grove Avenue
Richmond, Virginia 23220

Undue Credit for Lowered Highway Death Toll

The new 55-mile-per-hour speed limit imposed during the period of gasoline shortage last year has been given undue credit for a reduction in highway fatalities, says an editorial in the August 19 issue of the *Journal of the American Medical Association.*

Most crashes occur at speeds of less than 55 mph anyway, writes Lee N. Hames, director of safety education for the AMA. "We hope, of course, that the nationwide downward trend continues, but we believe that the savings in lives cannot honestly be attributed to any great extent to the reduction in the speed limit."

The energy shortage, with car pooling and the use of other methods of transportation, has greatly reduced the number of miles being driven. There are fewer automobiles on the road to hit, or be hit. Many lives are being saved by a greatly increased use of safety belts as a result of warnings and an interlock system in new cars that prevents cars from being driven without the safety belts being locked.

"It seems dubious that drinking drivers who are involved in so many fatal crashes will be too influenced by lower speed limits, since they already are disobeying the law by driving while intoxicated. And we don't see much change in the number of drunken pedestrians who are killed each year."

The editorial reminds that the Department of Transportation estimates that the increased use of bicycles, motorcycles and small cars brought about by the energy shortage will bring with it between 1,000 and 2,000 deaths which will tend to further reduce the hoped for savings in lives.

Growing Skull Fractures Syndrome

ABDON REINA, M.D.
Norfolk, Virginia

Growing skull fractures of childhood is a late complication of head injury, highly preventable if the dural repair is done early after the head injury.

SKULL FRACTURES in infancy and childhood are a common event during head injury. Most of these fractures go on to heal spontaneously without complications. A few of these fractures, and as a prerequisite, the ones with an underlying dural tear that generally goes unrepaired, will evolve into the so called growing skull fractures syndrome or leptomeningeal cyst of infancy and childhood. Such a case came to my attention and it is the subject of this report.

K. M. K., a five year old boy, was first examined on November 11, 1970, because of a "large pulsating soft spot in the right side of the head". His mother related that at age nineteen months the boy fell from a second floor onto a concrete sidewalk. He was rendered immediately unconscious for a few minutes. When first examined elsewhere following the injury he was found to be awake and alert but hemiparetic on the left side. Skull films (Fig. 1) showed a large diastatic, non depressed parieto-occipital fracture on the right side. The boy fully recovered and after a few days of observation he was discharged.

Figure 1

Figure 2

Over the years the family noted a progressively growing soft spot on the right side of the head. Following pediatric examinaton he was referred for neurosurgical investigation. The neurological examination was within normal limits. By this time the previously noted post traumatic hemiparesis had cleared up completely. There was not evidence of hemiatrophy in the left side of the face or body. Systemically he was found to have left cardiac hypertrophy associated to mild mitral valvular insufficiency with endocardial cushion defect but the patient was totally asymptomatic from the cardiac stand point. Examination of the head disclosed a soft pulsatile cranial defect measuring 6 x 4 cms in the right parietal area. Skull films (Fig. 2) lateral projection showed a large elongated bony de-

fect with irregular and sclerotic borders, areas of scalloping can be seen. Notice that the fracture line can be seen at the bottom end of the skull defect. In the AP view (Fig. 3) the

Figure 3

irregularity of the bone defect can be appreciated. The sclerosis is quite marked.

The lateral projection during pneumoencephalography (Fig. 4) showed focal segmented dilatation of the right lateral ventricle (curved arrows) facing the skull defect

Figure 4

(straight arrows). The contour of the contralateral ventricle (arrow heads) appears to be normal. A diagnosis of leptomeningeal cyst or growing skull fractures was made.

At surgery the cyst was dissected from dense adhesions to the overlying pericranium, at the periphery it was separated from the bony margins and around the dural defect. A careful dissection along the attachment to the cortex finally permitted complete removal. A duroplasty was performed using temporal facia. The thinned and sclerotic bone was removed all the way around and an acrylic cranioplasty completed. Three years following surgery the cranioplasty appears adequate and his neurological examination remains normal.

Clinical Findings

As indicated by Lende[1] the highlights of this syndrome are: 1. a skull fracture during infancy or childhood; 2. a dural tear at the time of the fracture; 3. brain injury underlying the skull fracture with contralateral focal neurological deficit; 4. progressive widening of the fracture to constitute a cranial defect. This condition occurs only in children and as a rule follows a severe head blow, the skull fracture is usually parietal, and diastatic, the overlying scalp is frequently not lacerated.

The initial focal neurological deficit commonly is hemiplegia that goes on to improve. However, the focal brain damage and atrophy will be manifested later with the appearance of epilepsy, hemiparesis, and hemiatrophy of the contralateral body. Another late sequelae of this condition is the development of mental retardation.

The x-ray findings were outlined by Dyke[2] in 1937. The radiological diagnosis is based on the presence of a widening of an old skull fracture, with scalloping of the inner table of the skull, sclerosis and increased vascularity of the bone around the fracture. The skull defect appears irregular and oriented along the fracture. Usually the elongated end of the defect is continuous with the fracture line.

Ventriculography invariably reveals ipsilateral focal ventricular dilatation.[3]

The angiogram can demonstrate blood vessels beyond the outer table of the skull providing the presence of brain herniation, some of these herniated vessels appeared flattened and irregular explaining the atrophic changes of the herniated cortex due to encephalomalacia.[4]

Pathogenesis

Taveras and Ransohoff in 1953[5] put forward the mechanism of cyst formation: following trauma the arachnoid herniates through the dural tear, hemorrhage produces local stasis of the cerebrospinal fluid, the protruding arachnoid aided by the pulsations of the brain will erode the edges of the fractures with concomitant compression of the underlying cortex. They also theorized that a ball valve mechanism possibly could be present in which the cerebrospinal fluid has easier ingress to the cyst than egress from the herniated arachnoid.

Discussion

Non depressed skull fractures are treated conservatively. It is perhaps due to this neurosurgical principle that many large non depressed but diastatic skull fractures with an underlying dural tear will go untreated surgically. These are the cases that most probably will go on later to develop the growing skull fracture syndrome. In a recent publication Thompson and collaborators[6] published a series of seven infants with diastatic non depressed fractures all operated on within a few days following trauma. In all the cases a dural tear with protruding brain was found. Brain debridement was performed on all seven, dural graft was done on six. This is, I believe, the first published effort to prevent the development of this syndrome. In their article and based on their clinical experience the authors advocate that surgical treatment early after trauma should follow in infants with diastatic skull fracture which margins are separated at least 4mm, another criteria included is the presence of overlying scalp swelling out of proportion to the one expected from a simple skull fracture, and focal neurological deficit contralateral to the fracture.

References

1. Lende, R. A., Erickson, T. C.: Growing Skull Fractures of Childhood. J. Neurosurg. 18: 479-489, 1961.
2. Dyke, C. G.: The Roentgen Ray Diagnosis and Treatment of Diseases of the Skull and Intracranial Contents. M: Nelson's Loose Leaf Medicine. W. W. Palmer, Ed., New York: T. Nelson & Son, 1937, pp 185-214.
3. Goldstein, F. P., Sakoda, T., Keeps, J. J., Dondson, K. and Brackett, C.E.P.: Enlarging Skull Fractures; and Experimental Study. J. Neurosurg. 27: 541, 1967.
4. Tenner, M. D., Stein, B. M.: Cerebral Herniation in the Growing Fracture of the Skull. Radiology 94: 341-355, 1970.
5. Taveras, J., Ransohoff, J.: Leptomeningeal Cyst of the Brain Following Trauma with Erosion of the Skull: Study of Seven Cases Treated by Surgery. J. Neurosurg. 10: 233-241, 1953.
6. Thompson, J. B., Mason, T. H., Haines, G. L., and Cassidy, R. J.: Surgical Management of Diastatic Linear Skull Fractures in Infants, J. Neurosurg. 39:493-497, 1973.

---

302 De Paul Medical Building
Norfolk, Virginia 23505

Splenic Abscess

SAMUEL D. GRAHAM, JR., M.D.
GERALD T. GOLDEN, M.D.
Charlottesville, Virginia

Splenic abscess, although uncommon, does occur. An interesting case is presented in which treatment was successful.

SPLENIC ABSCESS, an uncommon cause of intraabdominal infection, occurred recently in a patient one year following a roux-en-Y pancreatico-jejunostomy. A description of this case and brief comments form the basis for this report.

Case Report

A 59-year-old male appeared in the emergency clinic with chills, fever, malaise and left pleuritic chest pain of three days' duration. One year previously, he had undergone a roux-en-Y pancreatico-jejunostomy for pancreatic ascites. Both the operative procedure and the postoperative course were unremarkable, and he had remained well until the onset of the present illness. On examination, the rectal temperature was 39.5° C., and diminished breath sounds were present over the left pulmonary base. There was tenderness to deep palpation in the left upper abdominal quadrant. The white blood cell count was 17,500 with 85% polymorphonuclear cells, and a chest roentgenogram revealed elevation of the left hemidiaphragm with a left pleural effusion. The patient was admitted to the hospital with the diagnosis of bacterial empyema. Thoracentesis revealed a straw-colored, clear effusion that showed no organisms on gram stain. During the next three days, the patient had daily fever spikes to 39.5° C., and an aerobacter species was recovered from blood culture material. Serial abdominal films were unremarkable until the fourth hospital day, when they revealed subdiaphragmatic extraluminal gas in the left upper quadrant, suspicious of an intraabdominal abscess.

Under general anesthesia, the left subphrenic space was explored via the posterior transthoracic route. The abscess cavity was identified by transdiaphragmatic needle aspiration, and a small incision was made through a thickened abscess wall. Five hundred cc. of foul-smelling serosanguineous fluid escaped immediately; blood continued to well from the incision. The thoracotomy incision was enlarged, the diaphragm incised, and control of the splenic pedicle obtained. The abscess was found to lie totally within the splenic capsule, which was markedly thickened. Splenectomy was performed, with liberal drainage of the left upper quadrant. Cultures of the exudate revealed an aerobacter species. The patient was treated postoperatively with intravenous ampicillin for one week and discharged on the 10th postoperative day. He remains well six months postoperatively.

Comment

Splenic abscess is an uncommon disease, accounting for less than 5% of all intraabdominal abscesses.[3] The incidence in a large necropsy series has been less than 0.5%.[1,2,18,21] Suppuration within the spleen is most commonly due to metastatic infection from a distant site, including the middle ear,[3,28] skin, [4,5,17,27] oral cavity, [2,18] lung, [4,6,17,19] surgical wounds,[5,7,27,50] mural thrombi,[10] sickle cell anemia,[9] and the urinary tract.[1,4,17,21] Metastatic infection is often accompanied by abscesses in other organs, especially the brain, liver, lungs and kid-

From the Department of Surgery, University of Virginia Medical Center, Charlottesville.

neys. Although arterial embolization of infected material accounts for most cases, portal venous embolization has been reported,[8,13] with formation of simultaneous liver and pancreatic abscesses.[2,18] In some cases, a subcapsular splenic hematoma serves as a medium for proliferation of organisms from an otherwise insignificant bacteremia. In addition, patients with tuberculosis, typhoid fever, amebiasis, leprosy, meliodosis and relapsing fever may have splenic abscess as a primary feature of their disease.[12,38] Less frequently, splenic abscess arises from direct extension of a contiguous infection, as from a perforated ulcer, infected colonic diverticulum or perenephric abscess. The case under discussion probably involved extension from an infection at the site of the pancreatico-jejunostomy.

A painless abdominal mass may be the first sign of splenic abscess, but the clinical features of intraabdominal infection more commonly predominate. Fever (typically, of the Charcot variety), chills, sweating, tachycardia and leukocytosis are common.[12] Pleuritic left chest or upper quadrant abdominal pain, which may be referred to the left shoulder, and associated left upper quadrant tenderness are also common.[6] There may be edema and erythema of the skin overlying the spleen, particularly if the spleen is adherent to the abdominal wall.[3,7,15,28] Large splenic abscesses may be tympanitic or exhibit a fluid wave.[12,28] In rare instances, the disease may present as draining sinus in the flank,[14,22] or colonic obstruction at the splenic flexure.

Abdominal roentgenograms occasionally reveal gas in the splenic shadow,[8,13,18,26] with the stomach and colon being shifted to the right by a mass.[8,13] Chest roentgenograms frequently reveal left pleural effusion, and an elevated or immobile left hemidiaphragm.[6,8,13,19] An intrasplenic mass may be demonstrated by arteriography or scanning procedures, and these procedures may differentiate splenic abscess from subdiaphragmatic and perinephric abscess.[2,4,17,19,20]

Splenectomy with liberal drainage of the splenic bed is the treatment of choice. The transabdominal approach is favored because it permits adequate exploration of the subdiaphragmatic space and control of the splenic pedicle early in the operation. In poor-risk patients, or in patients in whom massive infection has completely obscured the anatomy, splenectomy with drainage may be performed, but the risk of hemorrhage is great.

This case illustrates the need for a cautious approach to infection of obscure origin in the left upper quadrant.

Summary

Splenic abscess occurred in a 59-year-old male one year following a roux-en-Y pancreatico-jejunostomy. Caution is advised in the management of left upper quadrant infection of obscure origin.

Bibliography

1. Ochsner, Alton and Graves, Amos: Subphrenic Abscess. Ann. Surg. 98: 961, 1938.
2. Reid, S. and Lang, S.: Abscess of the Spleen. Am. J. Surg. 88: 912, 1954.
3. Davidson, S. G., Doig, J. A., Evevard, G. S. H.: Acute Splenic Abscess. J. R. Coll. Surg. Edinb. 6: 44, 1960.
4. McSherry, C. K., Dineen, P.: Significance of Splenic Abscess. Am. J. Surg. 103: 618, 1962.
5. Billings, A. E.: Abscess of the Spleen. Ann. Surg. 88: 416, 1928.
6. Walber, I. J.: Abscess of the Spleen. New England J. M. 203: 1025, 1930.
7. Fauntelroy, A. M.: Report of a Case of Splenic Abscess. JAMA 56: 260, 1911.
8. Picklemein, J. R., Paloyan E., Block, G. E.: Surgical Significance of Splenic Abscesses. Surgery 68: 287, 1970.
9. Frankel, A., Ashikari, H., Dreiling, D. A., Kark, A. E.: Splenic Abscess. J. Mt. Sinai Hosp. 33: 404, 1966.
10. Case Records of the Massachusetts General Hospital. New England J. M. 285: 40, 1971.
11. Whelan, T.: Abscess of the Spleen. Am. J. Surg. 94: 945, 1957.
12. Jeliffe, D. B.: Splenic Abscess in the Tropics. J. Trop. Med. Hyg. 52: 134, 1949.

13. Rumold, M. and Orr, T.: Tuberculous Abscess of the Spleen. Ann. Surg. 98: 464, 1937.
14. Parrish, R. A., Sherman, H.: Surgical Significance of Splenic Abscess. Am. Surg. 30: 712, 1964.
15. Altemeier, W. A., Culbertson, W. R., Fullen, W. D.: Intra-abdominal Sepsis. Adv. Surg. 5: 281, 1971.
16. Maingot, R.: Splenic Abscess, in Abdominal Operations, ed. by R. Maingot (New York: Appleton-Century-Crofts, 1961).
17. Mihy, H. A., Schapira, H. E.: Total Body Opacification in the Adult. Am. J. Roentgenol. Radium Ther. Nucl. Med. 115: 630, 1972.
18. Cockshott, W. P., Weaver, G. J. M.: Primary Tropical Abscess: A Misnomer. British J. Surg. 88: 416, 1928.
19. Lepage, J. R., Pratt, A. D., Miale, A., Calvert, W. P.: Diagnosis of Splenic Abscess by Radionuclicle Scanning and Selective Arteriography. J. Nucl. Med. 13: 331, 1972.
20. Baltoxe, H. A., Watson, H. C., Levin, P. C.: Angiographic Appearance of Splenic Masses. Angiology 23: 316, 1972.

Thymoma and Associated Hypogammaglobulinemia

The cooperation of physicians is requested in the referral of patients for a continuing comprehensive study of patients with hypogammaglobulinemia associated with thymomas being conducted by the Metabolism Branch of the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Suitable patients with thymoma and hypogammaglobulinemia will be admitted to the Clinical Center for studies of immunologic function. In recent studies we have shown that an abnormality of suppressor T-lymphocytes is present in a major subgroup of patients with common variable hypogammaglobulinemia and may play a role in the pathogenesis of the hypogammaglobulinemia of this disorder. We now wish to determine if the hypogammaglobulinemia associated with thymoma is caused by a similar pathogenic mechanism.

The patients with thymoma and hypogammaglobulinemia will also be evaluated for the nature and extent of chronic infectious disease, disorders of gastrointestinal function, autoimmune disorders and hematological disorders including anemia and eosinopenia. Upon completion of their studies patients will be returned to the care of the referring physician who will receive a full report of the studies done as well as appropriate recommendations concerning therapy.

Physicians interested in having their patients considered for this study may write or telephone: Thomas A. Waldmann, M.D., Warren Strober, M.D., or Michael Blaese, M.D., Clinical Center, Room 4N-117, National Institutes of Health, Bethesda, Maryland 20014. Telephone: 301 496-6781.

Medical Grand Rounds . . . .

From the Department of Medicine, University of Virginia Medical Center

Edited by:

L. DWIGHT WOOSTER, M.D.
EDWARD W. HOOK, M.D.

Idiopathic Edema

Discussion by:

ROBERT M. CAREY, M.D.

Dr. John Davis: Today, we have an interesting problem of idiopathic edema. Dr. Robert Carey will discuss this clinical entity and Dr. Robert Nagy will present the patient.

Dr. Robert Nagy: E.M. is a 26 year old white female who was admitted to the University of Virginia Hospital for evaluation of edema and hypokalemia. Eight years prior to admission, when she was three months pregnant, the patient developed swelling around the eyes and of the hands and feet. During the pregnancy, she gained 42 pounds. Treatment with methyclothiazide produced partial reduction of the edema. Although delivery was complicated by mild hypertension and prolonged labor, a healthy baby was born. Over the next several years, the patient experienced intermittent edema and significant fluctuations in body weight and received at intervals treatment with diuretics and dextroamphetamine. During the past year, edema was partially controlled with furosemide, 80 mgm per day orally. In April 1974, the patient was admitted to another hospital with symptoms of marked muscle weakness, especially in the lower extremities, vomiting, and muscle spasms involving the hands. Evaluation revealed hypokalemia (K 2.2 mEq/1), which was refractory to potassium supplementation. The patient denied any relationship between menses and the development of edema; however, the edema was aggravated when she remained upright. The patient was subsequently admitted to the University of Virginia Hospital on July 17, 1974. Evaluation during this admission revealed no cardiovascular, hepatic or renal abnormalities. Hypokalemic alkalosis was present and was corrected by discontinuation of furosemide and potassium replacement. Oral contraceptives (a combination of ethyndiol diacetate and mestranol) were also discontinued and the patient was discharged on July 22, to be readmitted in three weeks for evaluation in the Clinical Research Center. By July 26, the patient had gained 23 pounds and had leg, abdominal and facial swelling. Subsequently, she was admitted to the hospital.

Physical examination revealed a pleasant, edematous young female weighing 74.9 kg, BP 146/80, P 18, R 18, T 37° C. Marked facial and periorbital edema was present. Cardiovascular examination demonstrated a Grade II/VI apical systolic murmur with no significant radiation, and an S4 gallop. Chest, abdominal and neurological examinations were unremarkable. Moderate pitting edema was observed in the lower extremities.

Laboratory Data: Urinalysis was normal, Hct 40%, WBC 7,800 with a normal differential. The SMA 6 and 12 were normal with a K of 4.9 mEq/1 and with an albumin of 4.7 gm%. Chest roentgenogram revealed a small left pleural effusion and electrocardiogram was within normal limits.

Hospital Course: The patient was placed on strict bed rest and a 100 mEq sodium diet without fluid restriction. Weight loss of 5.7 kg and regression of the edema occurred during the next five days. During this period of time, plasma samples for aldosterone and renin

and urine samples for creatinine, sodium, potassium and aldosterone were obtained. On the sixth hospital day, while on the 100 mEq sodium diet, the patient remained in the upright position for 12 hours while plasma and urine samples were again collected. The results of the studies will be discussed subsequently. She was discharged on the tenth hospital day weighing 73.7 kg. She was receiving hydrochlorothiazide, 50 mgm orally each day, and spironolactone, 100 mg by mouth, every six hours.

Dr. John Davis: Are there any questions?

Question from the audience: Was her edema aggravated when she was upright?

Dr. Nagy: The patient would normally wake up in the morning without edema, but at the end of a working day, she would have a recurrence of pedal as well as facial edema. Therefore, upright posture did aggravate her edema.

Question from audience: Is there a family history of diabetes?

Dr. Nagy: No.

Dr. Davis: Dr. Cooper, will you show the x-rays?

Dr. George Cooper: On admission, July 17, 1974, the chest x-ray was normal; the patient was free of edema at this time. On July 26, 1974, nine days later, after a weight gain of more than 20 pounds, the cardiac shadow increased appreciably; pulmonary venous congestion and pleural fluid in the left costophrenic angle are present.

Patient Interview

Dr. Davis: I had a chance to talk with the patient this morning so we have discussed some of the questions already. Were you perfectly well until your first pregnancy eight years ago?

Patient: Correct.

Dr. Davis: What was the first thing you noticed at that time?

Patient: Swelling in my ankles.

Dr. Davis: And what has been the general course since then? Has the swelling fluctuated or has it been generally progressive?

Patient: It has been getting progressively worse.

Dr. Davis: Has it progressed to a degree that it interferes with your life?

Patient: Definitely.

Dr. Davis: Are there any other problems associated with the edema?

Patient: I have constant headaches, but I don't know whether this has anything to do with the swelling.

Dr. Davis: Are the headaches more severe when the swelling is worse?

Patient: I really can't say because I wake up every day with a headache and go to bed every night with one.

Dr. Davis: Have you had any kind of swelling around your mouth or tongue?

Patient: My face sometimes becomes totally swollen.

Dr. Davis: Do you have a family history of this kind of problem?

Patient: No.

Dr. Carey: Is your weight gain greater in the morning or in the evening? How much weight can you gain in a day?

Patient: I have noticed that usually around 10 A.M. I've gained three pounds if I have gotten up around 7 A.M. By the end of a regular work day, I have gained as much as eight pounds.

Dr. Carey: By the next morning are you back down to your original weight?

Patient: Yes.

Dr. Carey: Have you ever received weight reduction pills other than the diuretics?

Patient: Yes, I was given an amphetamine.

Dr. Carey: When was this?

Patient: About five years ago.

Dr. Carey: Was there any difference in your weight at that time?

Patient: The swelling was very much under control then. I was also taking a diuretic; but when I stopped taking the amphetamines, I started swelling again.

Dr. Carey: During the past few months you have been treated with furosemide. Can you describe any general symptoms during this time?

Patient: I felt very weak and was nause-

ated. I experienced quite a bit of vomiting and a feeling of not being able to control my muscles. I would get muscle spasms and a contorted appearance of my hands and feet which I could not control. I have had muscle weakness in my legs.

Dr. Carey: Have you had any numbness or tingling of your legs associated with the weakness?

Patient: Yes.

Dr. Thomas Hunter: It seems to me that if you gained eight pounds a day you must have had to drink an awful lot of water. Do you get thirsty?

Patient: Not particularly. I drink about 40 ounces of liquid a day.

Dr. John Owen: You have mentioned gaining eight pounds during the course of the day. Do you weigh yourself morning and night?

Patient: Yes.

Dr. Owen: Does this imply that you lose eight pounds over night?

Patient: I usually lose 4 pounds overnight, but I have lost up to 8 pounds.

Dr. Owen: Do you have to get up at night to urinate?

Patient: Not usually, but at most only once during the night.

Dr. Joseph Gaskin: What is your usual activity during the day? Are you up and around most of the time, or do you have a chance to rest and put your feet up?

Patient: I don't have time to rest and put my feet up. I have a full-time job, doing clerical work.

Dr. Carey: Is there any past history of allergy?

Patient: No.

Discussion

Dr. Carey: The overt form of idiopathic edema, in which massive weight gain occurs over a period of a few hours, is unusual. At the University of Virginia Medical Center, in addition to the present patient, we have seen only two or three patients who manifest this magnitude of fluctuation in daily weight. However, this disease appears to be considerably more common when one considers the opposite end of the spectrum, which is exemplified by a mild degree of ankle edema occurring in women at the end of a day. There is an entire spectrum of idiopathic edema varying from minimal edema to the very severe form, demonstrated by the patient presented today. After ten days of being active at home, and on no diuretic therapy, she returned with a 25 to 30 pound weight gain associated with tachycardia, S_4 gallop, left pleural effusion, and evidence of pulmonary venous engorgement.

In this discussion, I will review the physiology of edema and discuss idiopathic edema as a specific disease.

In health, the body normally maintains a relatively constant fluid volume and a constant concentration of extracellular fluid. Even during ingestion of large quantities of sodium and water, the natriuretic and diuretic responses of the kidneys are sufficient to protect the individual against major alterations in volume of extracellular fluid. In disease, however, the rate of excretion of sodium and water may be reduced so that even a small daily intake of sodium and water is retained and may lead to progressive expansion of the extracellular fluid volume. As an excess of fluid accumulates in the interstitial spaces, the soft tissues swell and

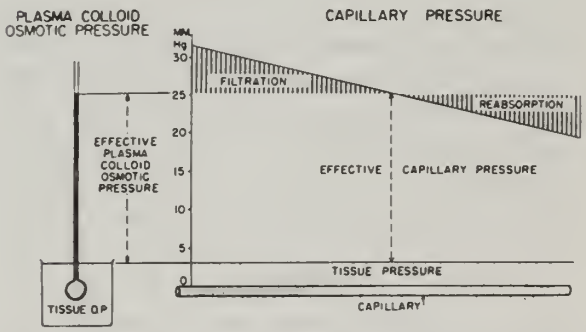


Fig. 1. Factors determining fluid exchange in capillaries. The effective colloidal osmotic pressure of the plasma is determined by the difference in protein concentration in tissues and in the plasma. The effective capillary pressure is the difference between capillary pressure and tissue pressure. The pressure gradient in capillaries under a specific set of conditions may produce filtration at the arteriolar end of the capillary and reabsorption at the venular end of the capillary with no net fluid exchange.

edema appears. With progression of this process ascites and pleural effusions may develop.

The formation of interstitial fluid is determined at the capillary level by forces that were described in the late 1800's by Starling (Fig. 1).[1] The hydrostatic pressure at the arteriolar end of the capillary is higher than the hydrostatic pressure at the venous end of the capillary. The net hydrostatic pressure at the arteriolar end favors formation of edema by filtration through the capillary wall. At the arteriolar end, there is a summation of the plasma osmotic pressure and the hydrostatic pressure to form the effective capillary pressure, which is higher than the surrounding tissue pressure. As filtration occurs, the hydrostatic pressure decreases along the capillary lumen up to the mid-portion of the capillary, where effective capillary pressure is equal to surrounding tissue pressure. At this point, there is no filtration of fluid. At the venous end of the capillary, the intravascular osmotic pressure is increased because of the loss of fluid without loss of protein along the arteriolar side. This increase in net colloidal osmotic pressure at the venous end of the capillary favors reabsorption of fluid from the interstitial space, and removal of fluid occurs. In health the rates of filtration and reabsorption are equal. However, in edematous states there is an imbalance of these pressures with accumulation of fluid in the interstitial space. This process leads inevitably to a reduction in plasma volume, which in turn leads to an inadequacy of arterial filling in the circulation. This one impairment, inadequacy of arterial filling, is a major defect, which all of the disorders of edema have in common.

One of the consequences of inadequate arterial filling is increased sympathetic activity (Table 1). This has some beneficial effects and some detrimental effects. A beneficial effect of the adrenergic sympathetic nervous system is the maintenance of an adequate circulation, which is achieved by peripheral vasoconstriction and by increase in cardiac output. However, circulating catecholamines and stimulation of the renal nerve result in the release of renin from the juxtaglomerular cells in the kidney. Since increased renin produces secondary aldosteronism, this may constitute a detrimental effect by enhancing sodium retention. Furthermore, adrenergic activity produces renal vasoconstriction which decreases renal blood flow, and which indirectly stimulates renin release. Therefore, when inadequate arterial perfusion occurs, two potent stimuli for renin release are mediated through the adrenergic nervous system.

TABLE 1

SYMPATHETIC NERVOUS SYSTEM ACTIVITY IN EDEMA-FORMING STATES

1. Maintains the circulation
   - Increases cardiac output
   - Peripheral vasoconstriction
2. Releases renin directly
3. Produces renal vasoconstriction
   - Decreases renal blood flow

A second consequence of inadequate arterial filling is the release of renin through a mechanism not entirely related to the sympathetic nervous system. Because the effective extracellular fluid volume is decreased, the baroreceptor mechanism in the renal afferent arteriole is activated, and this activation stimulates the juxtaglomerular cells to release renin into the peripheral circulation.

Renin acts on renin substrate, an alpha-2 globulin, to produce angiotensin I, a decapeptide, which is converted to the octapeptide, angiotensin II, while in the pulmonary vascular bed. Angiotensin II then stimulates aldosterone secretion. Therefore, secondary aldosteronism due to a primary decrease in the ef-

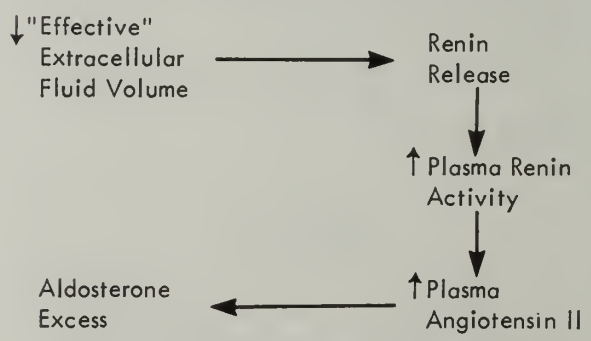


Fig. 2. Mechanism of secondary aldosteronism

Renin acts on renin substrate, an alpha-2 globulin, to produce angiotensin I, a decapeptide, which is converted to the octapeptide, angiotensin II, while in the pulmonary vascu-

fective extracellular fluid volume exists (Fig. 2).

In healthy individuals given exogenous aldosterone for several weeks, retention of 250-400 mEq of sodium occurs over the first ten days (Fig. 3).[2] During these first ten days of

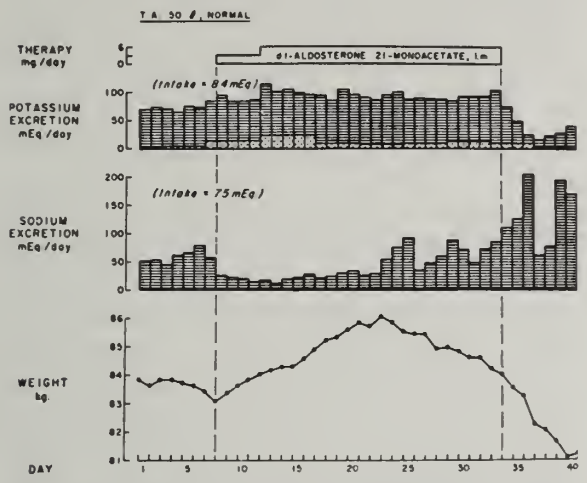


Fig. 3. The effect of aldosterone on weight and sodium and potassium excretion in normal subjects (Reprinted by permission of the author and the Editor of the *Journal of Clinical Investigation*, from the paper by Nelson and Thorn, 1958).

aldosterone treatment, the extracellular fluid volume is expanded by 2-3 liters, in a linear fashion, and concomitantly, sodium excretion decreases because aldosterone is producing distal tubular reabsorption of sodium in the kidney. Potassium excretion remains fairly stable, although it may increase slightly. Nevertheless, after the first ten days of aldosterone administration, the kidney spontaneously stops retaining sodium and begins to excrete it. This natriuretic process increases in a progressive fashion and the patient diureses and loses weight. No matter how long the aldosterone is given, the patient will continue to escape from its edema-forming characteristics which were present in the first 10 days of treatment. The etiology of this so-called "escape phenomenon" is not clear, but it is thought to be mediated by an inhibition of proximal tubular sodium reabsorption, due to the expansion of the extracellular volume occurring within the first ten days. There is controversy as to whether the natriuretic principle, through which escape occurs, is due to hormonal factors or due to hemodynamic and peritubular capillary factors within the kidney.

In contrast to a normal individual, in an edematous patient the "escape" mechanism fails. Secondary aldosteronism continues unabated and the tissue pressure is progressively elevated. This increased tissue pressure continues until: 1. it counteracts the outward filtration force which initiated the edema; 2. the cause of the edema is removed; 3. the plasma volume is replenished to the point that hypervolemia inhibits renin and aldosterone production, or 4. the "escape mechanism" is reactivated. Secondary aldosteronism is never the cause of edema, but is the essential link in the retention of sodium and water required for edema formation.

I would now like to consider the various causes of edema which we encounter in clinical medicine (Table 2). The first and probably

TABLE 2

Causes of Edema

1. Congestive heart failure
2. Cirrhosis of the liver
3. Nephrosis and other causes of hypoproteinemia
4. Hypothyroidism
5. Chronic peripheral venous insufficiency
6. Lymphedema
7. Idiopathic edema

most common cause of edema is congestive heart failure. This is related etiologically to a combination of factors the most important of which is an increase in venous pressure, which increases the hydrostatic pressure in the capillary, leading to a transudation of fluid into the interstitial space. A second cause of edema is cirrhosis of the liver. The most important pathogenetic mechanism in cirrhosis is a decreased synthesis of serum proteins with an associated decrease in the oncotic pressure of the plasma, causing a transudation of fluid into the interstitial space, and resulting in a decreased plasma volume and an increase in aldosterone production. Additionally, aldosterone metabolism is inhibited by the hepatocellular disease. Therefore, in cirrhosis, there is a reduction in oncotic pressure, along with an increased synthesis of and a decreased catabolism of aldosterone. Nephrosis and other

causes of hypoproteinemia produce edema by a decrease in the oncotic pressure as the primary mechanism. In nephrotics, plasma aldosterone levels are probably the highest of any of the edema forming states. Hypothyroidism can be associated with edema, which is thought to be secondary to an increase in capillary permeability. This increase in capillary permeability is responsible for a leakage of protein into the interstitial space; an elevation of protein content in the interstitial fluid in patients with hypothyroidism has been demonstrated. Furthermore, increased capillary permeability is the probable pathophysiologic mechanism responsible for edema formation in angioneurotic edema, in immune complex disease, and in diabetes mellitus. Likewise, exposure to extremes of temperature can produce edema, probably secondary to an increase in capillary permeability. Chronic peripheral venous insufficiency obviously can lead to edema, probably secondary to increased venous hydrostatic pressure. Another cause of edema is lymphedema, which is due to obstruction of the lymphatics. Ordinarily, fluid which leaks into the interstitial space is removed by the lymphatics. However in lymphedema, the lymphatic drainage is inhibited and the formation of interstitial fluid exceeds the amount of fluid normally removed by the lymphatics. Malfunction of the lymphatic system may be contributory in other edema forming states.

In summary, in all of these disease processes, there are multiple reasons for edema formation, and any combination of 1. increased capillary pressure; 2. increased venous pressure; 3. decreased plasma oncotic pressure; 4. increased capillary permeability, and 5. failure of lymphatic drainage, may play a contributory role.

In patients with "idiopathic edema" all known causes of edema have been excluded.

TABLE 3

Clinical Characteristics of Idiopathic Edema

Age range: 20-40 years
Sex: Women
Large weight swings, progress from morning to evening
Increased incidence of emotional disturbances and "allergic history"
Pre-menstrual and postural accentuation

The clinical characteristics of patients with idiopathic edema are shown in Table 3. The age range of patients with idiopathic edema is usually 20-40 years and they are invariably women. Characteristically, they have large fluctuations in weight. Many young women who have very mild idiopathic edema go undiagnosed. In severe idiopathic edema, patients develop progressive weight gain during the day. This weight alteration should be documented by having patients weigh themselves both in the morning and in the evening on several different days. The edema is usually not pitting, but when severe, it can be pitting. There is an increased incidence of history of allergy, including urticaria, hayfever and other allergic manifestations. Some patients have angioneurotic edema prior to the onset of idiopathic edema. Exacerbation and resolution of the edema is usually related to the menstrual period and, hence, it has been called "cyclic edema." This form of edema is seen very commonly after the initiation of oral contraceptive therapy or after pregnancy, as it was in the patient presented today.

Patients with idiopathic edema can be subdivided into three groups.[3] (Table 4) One

TABLE 4

Mechanisms of Idiopathic Edema

1. Orthostatic sodium retention — 52%
2. Orthostatic water retention — 32%
3. Non-orthostatic edema — 16%

group consists of patients who have orthostatic sodium and water retention. This group comprises fifty-two percent of all patients with idiopathic edema. Another group, comprising thirty-two percent of the total, have orthostatic water retention without sodium retention. Another group, consisting of the remaining sixteen percent of the total, have non-orthostatic edema. Thus, eighty-four percent of all patients with idiopathic edema have aggravation of their edema with upright posture.

In orthostatic sodium retainers, the glomerular filtration rate and renal plasma flow fall by 50-70% with the upright posture, and usually there is an increase in aldosterone. Thus,

orthostatic sodium retainers have postural hyperaldosteronism. However, the stimulus to aldosterone secretion is uncertain, mainly because the plasma renin activity is not usually correlated with aldosterone levels in most of these patients. Additionally, other stimuli to aldosterone secretion, namely potassium and ACTH, are not related to the hyperaldosteronism. Therefore, there is no proven stimulus to aldosterone secretion in orthostatic sodium retainers in the upright posture.

In othostatic water retainers, water excretion falls independent of sodium with upright posture. The mechanism of edema in the orthostatic water retainers is unknown but could be related to increased release of antidiuretic hormone when in the upright posture. The mechanism of non-orthostatic edema is unknown.

In consideration of the physiologic mechanism of idiopathic edema, Gill and Bartter have demonstrated a low plasma volume in many of these patients, and have shown that they have a low mean serum albumin, 3.27 grams percent, as opposed to 3.82 grams percent in nonedematous individuals.[4] They also demonstrated an increased albumin breakdown in these patients, some of whom had a decrease in albumin synthesis, but most of whom had an increased catabolism of albumin. Of course, reduction in albumin leads to a decrease in plasma oncotic pressure, which would initiate edema. Furthermore, they found no change in albumin metabolism after diuretic therapy, implying that the decrease in serum albumin, which was probably secondary to an increased breakdown, was not related to an increase in total body water. This concept provoked the following argument: In the nephrotic syndrome, edema is usually associated with a serum albumin of less than 3.0 grams percent; in patients with idiopathic edema it is greater than 3.0 grams percent. Therefore in idiopathic edema this reduction in serum albumin may not be responsible for the initiation of edema.

In further consideration of the etiology of idiopathic edema, Gill and co-workers demonstrated an increase in sympathetic nerve activity to the kidney.[5] This is a common factor in most cases of edema in general. However, an increase in norepinephrine excretion has not been related to posture, and plasma catecholamine determinations were not available in these individuals. Other authors have postulated that abnormal capillary permeability is responsible for the transudation of fluid into the interstitial space.[6,7] In support of this concept is that if labeled albumin is injected into these patients, it is then found in the interstitial spaces. Additionally, some of these patients have been demonstrated to have a thickened capillary basement membrane on electron microscopy. Impaired carbohydrate tolerance has also been discovered in some patients with idiopathic edema, although they do not have overt diabetes mellitus. Patients with idiopathic edema and an impaired glucose tolerance usually have a positive family history for diabetes mellitus. Thus, capillary permeability, a thickened capillary basement membrane, and the relationship to diabetes mellitus raises the question of whether or not some of these patients are early diabetics with a complicating vascular disorder.

In the treatment of idiopathic edema (Table 5), the first step is to stop potent diuretic agents. As previously stated, one of the mechanisms involved in idiopathic edema is a decrease in the plasma volume and a reduction in arterial filling. If a patient is treated with potent diuretics, such as furosemide, there is a further decrease in plasma volume and a relatively greater reduction in plasma volume when they assume an upright posture. Thus, potent diuretics would accentuate the weight swings and would contribute to a severe hypokalemic alkalosis, which was present in this patient on her initial hospitalization. Secondly, elastic stockings can be of benefit by increasing tissue pressure in the lower extremities, and

TABLE 5

Treatment of Idiopathic Edema

1. Stop potent diuretic agents
2. Elastic stockings
3. Spironolactone
4. Other mild diuretic agents
5. Dextroamphetamine

thereby favors movement of fluid into the intravascular space. A third mode of therapy is the use of amphetamines. The patient presented today was treated with amphetamines and described a reduction in her edema. The mechanism of amphetamines in reducing edema in patients with idiopathic edema is not completely understood. About ten years ago, Streeten and co-workers compared treatment with dextroamphetamine in these patients, and in normal controls, and demonstrated an abrupt decrease in secretion of aldosterone after treatment.[8] This data was interpreted as evidence that dextroamphetamine may be an inhibitor of aldosterone synthesis. However no further studies have reconfirmed this concept, and most investigators in endocrinology do not regard dextroamphetamine as an adrenal inhibitor. Finally, spironolactone, a competitive antagonist of the end organ effects of aldosterone, is probably the treatment of choice. Most patients should be treated with spironolactone. This patient was treated with four hundred milligrams of spironolactone, a total blocking dose of this drug. Its effect normally begins about two weeks after the initiation of treatment. Gradually, the dose can be tapered until the edema redevelops and then increased slightly in order to maintain an edema-free state with as few side effects from the spironolactone as possible. The patient is also treated with a thiazide diuretic.

A portion of the studies, which we obtained on this patient during her evaluation on the Clinical Research Center (CRC) are shown in Table 6. When the patient was initially admitted to the CRC, she was grossly edematous. Her face and legs were markedly edematous and she had a left pleural effusion. She was placed on bed rest without diuretics and lost a significant amount of weight. She was also placed on a 100 mEq sodium diet and a protocal study. On the first day of the study, she was supine from 8 A.M. to 8 P.M. and her weight was 151.8 pounds. On the second day, she remained upright and ambulatory for twelve hours between 8 A.M. and 8 P.M., and gained 7 pounds during this period of time. Her volume of urine, compared between the two days was almost the same. However, we were not satisfied with the reliability of her recorded fluid intake. Her urine osmolality was 467 milliosmoles when she was supine, and dropped to 167 milliosmoles when she was upright. Her urinary sodium while in the supine position was 91 mEq/1, and after twelve hours in the upright posture, the urine sodium dropped to 1.1 mEq/1. Despite the fact that the urine volume was approximately the same on both days, her creatinine clearance was 113 ml/min in the supine position and dropped to 42 ml/min in the upright position. The plasma renin activity was 2.39 ng/ml/hr on the supine day and increased about sixfold during the upright period. Her urinary aldosterone level doubled. These data support the following sequence of events occurring in response to upright posture: 1. decreased glomerular filtration and renal plasma flow; 2. rise in plasma renin, and 3. secondary aldosteronism.

As previously stated, work by Streeten has shown no correlation between renin and aldosterone in the upright posture in idiopathic

TABLE 6

STUDIES* OF THE PATIENT ON TWO CONSECUTIVE DAYS AT THE CLINICAL RESEARCH CENTER UNIVERSITY OF VIRGINIA HOSPITAL

	12 hrs. Supine	*12 hrs. Upright*
Weight (lbs)	151.8	158.8
Urine volume (ml)	1370	1490
Urine osmolality (mOsm/1)	467	167
Urine sodium (mEq/24 hrs.)	91.1	1.1
Creatinine clearance (ml/min)	113	42
Plasma renin activity (ng/ml/hr)	2.4	13.6
Urine aldosterone (ugm/24 hrs.)	34.6	77.3

*These studies were performed on a constant 100mEq sodium diet.

What does man have in common with Samson?

Neither man nor the gorilla can synthesize vitamin C. Interestingly, the slow loris, a primate much further down the evolutionary scale, can convert L-1,4-gulonolactone to ascorbic acid in its liver and presumably does not require an exogenous source of ascorbic acid.

Because man can neither synthesize vitamin C nor store most of the water soluble vitamins, these nutrients must be replenished continuously in order to maintain normal tissue levels.

Generally, this is accomplished in his daily diet. But under conditions of illness, stress, in convalescence or following surgery, vitamin stores may be depleted or metabolic demands increased.

In such cases, Surbex-T may be indicated. Surbex-T restores the water-soluble vitamins with each tablet providing 500 mg. of vitamin C plus high potency B-complex.

ABBOTT

SURBEX-T® 500 mg. of Vitamin C with High Potency B-Complex

Restores what the body cannot effectively store

403481

When diarrhea wrings the wedding belle...

It's all very well to counsel patience in diarrhea patients. There are times when relief of symptoms can't come too soon.

X-ray studies[1] in 16 normal subjects showed just how promptly the active ingredient in Lomotil does its work.

Lomotil retarded gastrointestinal motility particularly during the first three hours after administration. It continued its moderating action on the bowel for at least three hours more.

Physicians prescribe Lomotil more often than any other drug when the urgency for the control of diarrhea is most distressing.

1. *Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, Acta Gastroent. Belg. 21:674-680 (Sept.-Oct.) 1958.*

Lomotil®

TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride . . 2.5 mg.
(Warning: May be habit-forming)
atropine sulfate . . . . . 0.025 mg.

Saves the Day

IMPORTANT INFORMATION: This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,

Sign of a cold* sufferer

Time for Ornade®

Each Spansule® capsule contains 8 mg. Teldrin®
(brand of chlorpheniramine maleate);
50 mg. phenylpropanolamine hydrochloride;
2.5 mg. isopropamide, as the iodide.

Fast relief of upper respiratory congestion and hypersecretion* with convenient b.i.d. dosage.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* **Indications**
Based on a review of this drug by the National Academy of Sciences — National Research Council and/or other information, FDA has classified the indications as follows:

Possibly effective: For relief of upper respiratory tract congestion and hypersecretion associated with vasomotor rhinitis and allergic rhinitis, and for prolonged relief.

Lacking in substantial evidence of effectiveness: For relief of nasal congestion and hypersecretion associated with the common cold and sinusitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

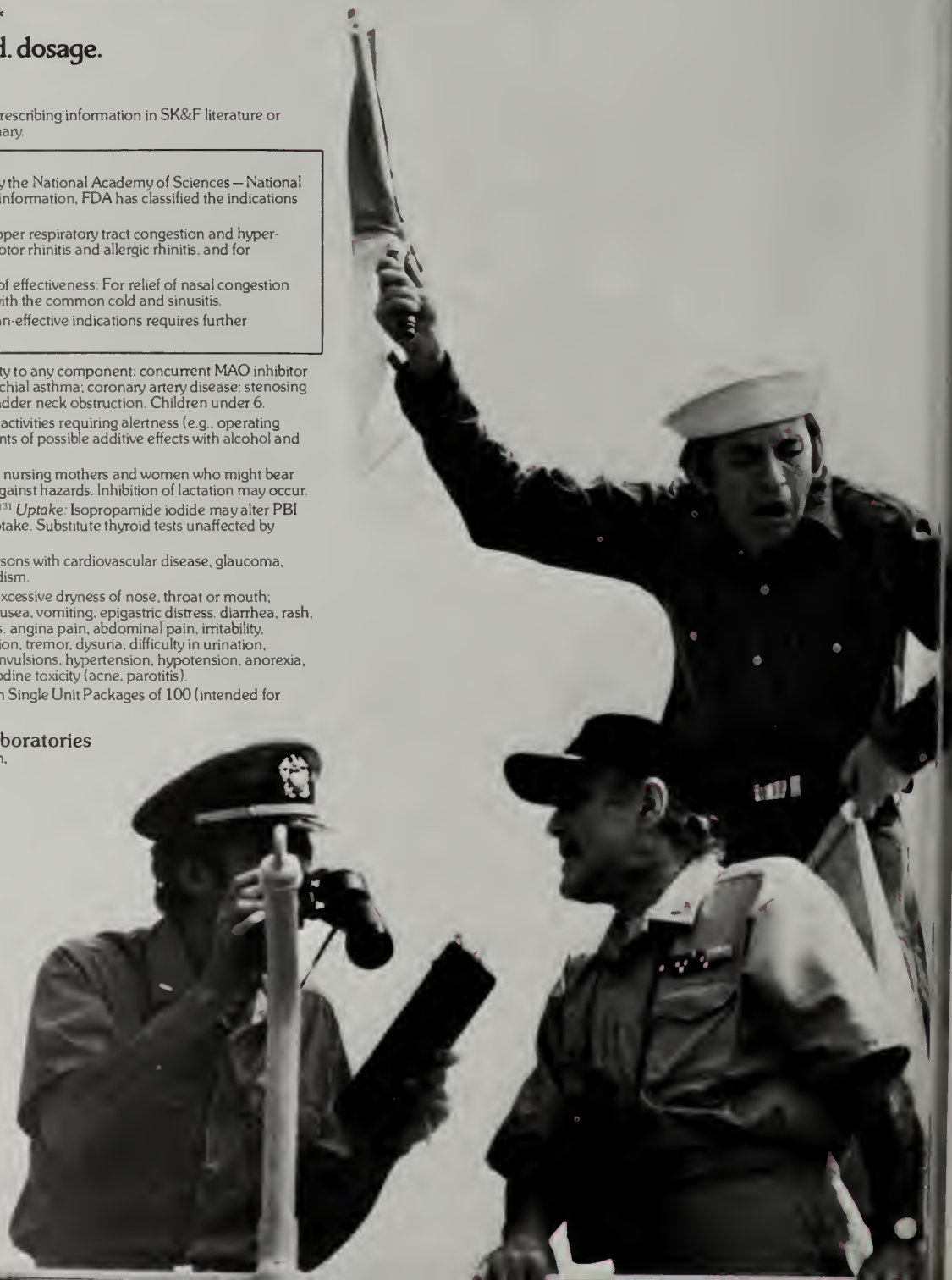
Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules; in Single Unit Packages of 100 (intended for institutional use only).

Smith Kline & French Laboratories
Division of SmithKline Corporation,
Philadelphia, Pa. 19101



edema with orthostatic sodium retention (Fig. 4). Usually these patients have a rise in aldosterone excretion but no rise in plasma renin

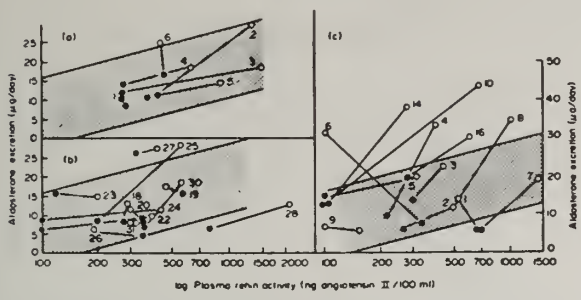


Fig. 4. Correlation between plasma renin activity and aldosterone excretion rate in control and edematous subjects on a 200mEq. sodium diet. (a) Control subjects; (b) orthostatic water retainers and non-orthostatic edema; (c) orthostatic sodium retainers. The shaded areas enclose the 95% confidence limits of the regression describing the correlation between log PRA and urinary aldosterone excretion in the control subjects. Lines connect the observations in recumbency (o) and in the upright posture for 12 hours (o) in each subject. (Reprinted by permission of the authors and the Editor of *Clinical Science and Molecular Medicine*, from the paper by Streeten et al, 1973).

activity in response to upright posture. In this situation, the stimulus to aldosterone is unknown. The physiology of these patients is clearly different from that of patients with orthostatic water retention or nonorthostatic edema who have a corresponding rise in renin and aldosterone with upright posture.

In summary, our patient has idiopathic edema characterized by orthostatic sodium retention and secondary aldosteronism in the upright position. However, she differs from the usual patient with orthostatic sodium retention in that she has a profound rise in renin along with a rise in aldosterone in response to upright posture. Her edema should be controlled by blockade of the renal effects of aldosterone with spironolactone.

Dr. Davis: That was a very concise and lucid review. I do not understand how her weight increased and yet there was no increased fluid intake and the urinary output did not seem to vary.

Dr. Carey: She certainly had an increase in her interstitial fluid and expanded her extracellular fluid volume profoundly when upright. The fact that her urine volumes were about the same is puzzling; however, we did not have a valid estimate of her fluid intake. Her fluid intake must have increased appreciably in order to increase her weight while she excreted the same urine volume in the upright position.

Dr. Owen: I think one point Dr. Streeten noted when studying these patients was the difficulty in reproducing in a controlled metabolic study the fluctuations which these patients experience in their ordinary activities. I think the Clinical Research Center studies are very illuminating and can perhaps throw some light on the subject. In the fasting individual, loss of sodium and water occurs. Fasting may lead to increased glucagon secretion, and glucagon may be a natriuretic hormone. In the studies with dextroamphetamine, is the anorectic effect of the drug producing a relative degree of fasting, and could glucagon be responsible for his findings?

Dr. Carey: That is an interesting point. In the studies reported by Streeten, the decrease in aldosterone secretion in response to dextroamphetamine was almost immediate, whereas it takes several days to produce a natriuresis of starvation. Therefore, while your hypothesis is interesting, I am uncertain that it explains all of the effects of amphetamines. However, I would not be surprised if the mechanism you are proposing does contribute to the long term response to this therapy.

Dr. Curnow: What time of day was your plasma renin activity obtained?

Dr. Carey: We obtained these measurements in the mid-portion of each of the twelve hour periods.

Dr. Curnow: Will a normal person's response of plasma renin activity and aldosterone secretion change when moving from a supine to an upright position?

Dr. Carey: The upright posture is a normal stimulus to plasma renin activity. This patient has an exaggerated response, both in the plasma renin activity and in the urine aldosterone excretion. These responses are of the magnitude seen during acute sodium depletion or administration of potent diuretics.

Dr. Curnow: You mentioned the possibil-

ity of a diminished intravascular volume or arterial volume as a mechanism. Is there any evidence for orthostatic hypotension or any other manifestation of contract intravascular volume in this patient?

Dr. Carey: She certainly had impressive evidence of depleted plasma volume when she was taking furosemide. She had a marked rise in pulse and about a 15 mm Hg. fall in blood pressure in response to standing.

Dr. Curnow: When she was admitted with her edema the second time on no medications, were any orthostatic studies done to see if her BP did rise or fall inappropriately when she stood or is there any real evidence she actually had a diminished arterial volume?

Dr. Carey: She did have some postural hypotension and tachycardia when she was admitted.

Dr. Gaskin: I have been impressed with the initiation of this process by pregnancy or by estrogen therapy. None of the studies that I have reviewed or that you have reported today relate the edema to estrogen levels. Are there any such studies?

Dr. Carey: I am not aware of studies of estrogen levels in females with idiopathic edema. However, there is a study, done by Dr. Sterling at Columbia, on males treated with large doses of diethylstilbestrol for prostatic carcinoma. There was no evidence of edema in these patients. The clinical experience with idiopathic edema patients is variable, but usually they do have a decrease if not a complete cessation of edema at menopause.

Dr. Gaskin: Is there evidence that the birth control pills were playing a role in this case?

Dr. Carey: I don't know. Birth control pills could have been contributory and that is why we stopped them.

References

1. Starling, E. H., On the Absorption of Fluids From the Connective Tissue Spaces. J. Physiol. (Lord) 19:312, 1896.
2. Nelson, D. H. and Thorn, G. W., Response of Normal Subjects to Large Amounts of Aldosterone. J. Clin. Invest. 37:1549, 1958.
3. Streeten, D. H. P., Dalakos, T. G., Louma, M., Fellerman, H., Clift, G. V., Schletter, F. E., Stevenson, C. T. and Speller, P. J., Studies of the Pathogenesis of Idiopathic Edema: The Roles of Postural Changes in Plasma Volume Plasma Renin Activity, Aldosterone Secretion Rate and Glomerular Filtration Rate in the Retention of Sodium and Water. Clin. Sci. and Molec. Med. 45:347, 1973.
4. Gill, J. R., Jr., Waldmann, T. A. and Butler, F. C., Idiopathic Edema I. The Occurrence of Hypoalbuminemia and Abnormal Albumin Metabolism in Women with Unexplained Edema. Am. J. Med. 52:444, 1972.
5. Gill, J. R., Jr., Cox, J., Delea, C. S. and Butler, F. C., Idiopathic Edema II. Pathogenesis of Edema in Patients with Hypoalbuminemia. Am. J. Med. 52:452, 1972.
6. Coleman, M., Harwith, M. and Broan, J. L., Idiopathic Edema. Studies Demonstrating Protein Leaking Angiopathy. Am. J. Med. 49:106, 1970.
7. Sims, E. A. H., McKay, B. R., Shirai, T., The Relation of Capillary Angiopathy and Diabetes Mellitus to Idiopathic Edema. Am. J. Med. 63:972, 1965.
8. Speller, P. J. and Streeten, D. H. P., Mechanism of the Diuretic Action of D-amphetamine. Metabolism. 13:453, 1964.

Diagnostic Laboratory Medicine . . . .

Antimicrobial Susceptibility of Common Bacterial Species—1974

HARRY P. DALTON, PH.D.
MARVIN J. ALLISON, PH.D.
MARIO R. ESCOBAR, PH.D.

At the Medical College of Virginia, it has been found that the laboratory recording of the percentage of a bacterial species susceptible to a particular antibiotic is a valuable guide to the attending physician when he is forced to empirically choose an antimicrobial agent. However, it must be emphasized that these results reflect only the antimicrobial spectrum for a particular microorganism *in vitro* because many factors which may affect *in vivo* activity cannot be measured. Also, the *in vitro* environment may affect the activity of an antimicrobial agent.

The susceptibility pattern of 14 bacterial species to 14 antimicrobial agents is listed in Table I. The results were obtained by means of a disc diffusion technique using Difco discs on trypticase-soy agar medium which had been inoculated with the test organism. The technique was controlled by repeated testing of stock cultures of known susceptibility and by parallel tube dilution tests.

The results in Table I clearly demonstrate that for Gram positive organisms the activity of an antibiotic is dependent upon the bacterial species. For example, all strains of *staphylococcus aureus* were susceptible to methicillin while only 6% of the enteric Streptococcus were reported sensitive to this drug. Clindamycin is included in the survey for the first time and shows good *in vitro* activity against some of the Gram positive organisms.

The results in Table I also demonstrate that the majority of the Gram negative organisms are susceptible to gentamicin and chloramphenicol with the exceptions being evident from the table. The inverse activity of carbenicillin and cephalothin against *Klebsiella* and

TABLE I

ROUTINE CULTURE SENSITIVITY—1974

Organism	Number of Strains	Penicillin (10)*	Ampicillin (10)	Methicillin (5)	Carbenicillin (50)	Cephalothin (30)	Erythromycin (2)	Clindamycin (2)	Tetracycline (30)	Streptomycin (10)	Chloramphenicol (30)	Kanamycin (30)	Gentamicin (10)	Nalidixic Acid (30)	Nitrofurantoin (100)
		Percent of Strains Sensitive													
Staphylococcus aureus	240	25	38	100	ND	98	97	97	87	86	97	ND	ND	ND	ND
Staphylococcus epidermidis	210	52	67	89	ND	97	87	90	69	85	95	ND	ND	ND	ND
Enteric Streptococcus	223	98	98	6	ND	92	86	ND	28	6	97	ND	ND	ND	71
Beta Streptococcus (A)	129	100	99	95	ND	99	99	92	88	7	99	ND	ND	ND	ND
Beta Streptococcus (Not A)	97	99	99	90	ND	99	98	93	52	ND	99	ND	ND	ND	ND
Alpha Streptococcus	141	94	93	63	ND	93	87	71	66	24	98	17	ND	ND	ND
Escherichia	334	ND†	63	ND	68	88	ND	ND	77	80	91	93	99	92	94
Enterobacter	243	ND	20	ND	79	20	ND	ND	77	82	76	88	99	88	94
Klebsiella	265	ND	11	ND	22	88	ND	ND	71	83	75	86	96	90	72
Serratia	43	ND	11	ND	69	ND	ND	ND	41	46	72	86	93	46	0
Proteus mirabilis	224	63	82	ND	91	92	ND	ND	2	83	93	97	99	91	20
Providencia	60	ND	10	ND	18	5	ND	ND	0	20	12	98	86	88	20
Pseudomonas aeruginosa	237	ND	ND	ND	91	ND	ND	ND	5	7	12	7	94	5	5
Herellea vaginicola	47	ND	10	ND	98	ND	ND	ND	57	25	23	91	91	78	10

*Figures in parentheses represent the antibiotic concentration in ug/ml used.
†ND—Not done.

Enterobacter is interesting and is another example of why identification of a Gram negative organism to its proper genus level may aid in selecting therapy. It is also of interest to observe that *Pseudomonas aeruginosa* and *Herellea vaginicola* isolated in this laboratory continue to show good susceptibility to carbenicillin.

Division of Clinical Pathology
Medical College of Virginia
Health Sciences Division
Virginia Commonwealth University
Richmond, Virginia

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION
(Act of August 12, 1970: Section 3685. Title 39. United States Code)

1. Title of Publication
   Virginia Medical Monthly
2. Date of Filing
   September 13, 1974
3. Frequency of Issue
   Monthly
4. Location of Known Office of Publication (Street, city, county, state, zip code)
   4205 Dover Rd., Richmond, Va. 23221
5. Location of the Headquarters or General Business Offices of the Publisbers (Not printers)
   4205 Dover Rd., Richmond, Va. 23221
6. Names and Addresses of Publisher, Editor, and Managing Editor.
   Publisher—The Medical Society of Virginia, 4205 Dover Rd., Richmond, Va. 23221
   Editor—Harry J. Warthen, M.D., 2304 Monument Avenue, Richmond, Va. 23220
   Managing Editor—E. Spencer Watkins, 4205 Dover Rd., Richmond, Va. 23221
7. Owner
   The Medical Society of Virginia
   4205 Dover Rd., Richmond, Va. 23221
8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities
   There are no bondholders, mortgagees and other security holders.
9. For completion by nonprofit organizations authorized to mail at special rates (Section 132.122, Postal Manual) The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during preceding 12 months.
10. Extent and nature of circulation

	Average No. copies each issue during preceding 12 months	Actual number of copies of single issue published nearest to filing date
A. Total no. copies printed (Net press run)	5107	5345
B. Paid circulation		
1. Sales through dealers and carriers, street vendors and counter sales	0	0
2. Mail subscriptions	4822	5042
C. Total paid circulation	4822	5042
D. Free distribution (including samples) by mail, carrier or other means	235	235
E. Total distribution (sum of C and D)	5057	5277
F. Office use, left-over, unaccounted, spoiled after printing	50	68
G. Total (sum of E & F—should equal net press run shown in A)	5107	5345

I certify that the statements made by me above are correct and complete—E. Spencer Watkins, Managing Editor.

Public Health ....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Virginia Uterine Cancer Detection Campaign

The Virginia Division of the American Cancer Society works closely (through its district and local chapters) with local health departments in public education and information programs. Although PAP smear campaigns are usually directed towards higher risk medically indigent groups, the entire community is included in ACS campaigns. In 1972, the Virginia Division of ACS organized the Uterine Cancer Task Force. This concept has now been extended to Task Forces in the 15 ACS districts in the Commonwealth. The primary goal of the Virginia Task Force is to assure that every adult woman in Virginia receives at least one cervical PAP test in the four year period ending in 1976. District Task Forces include physicians from local medical societies, health departments, and specialists in obstetrics-gynecology, and pathology. Registered nurses and lay volunteers are also represented on both State and District Task Forces.

Roadblocks

To date Task Force efforts to increase cervical cancer screening amongst medically indigent women have been frustrated by no assurance of funds from the State Health Department for the interpretation of the additional PAP smears generated by education and information programs. Physician, nurse, and lay volunteers are usually available through local chapters of medical societies, nurses associations, local health departments and the ACS. Although most local health departments have limited clinic space, personnel and funds to pay for expanded clinic hours, the critical factor remains the inability of the State Health Department to reimburse pathologists for slides beyond the current volume. Because of this, local innovations such as opening health department clinics in the evenings or weekends with volunteer staff have not been tried.

General Goals of Health Department Under the Uterine Cancer Detection Campaign

The overall goal of the Virginia State Department of Health is to influence more high risk, medically indigent females to take advantage of the annual PAP tests. By doing so, it is expected to dramatically increase early cervical cancer detection in Virginia and eventually decrease the death rate and incidence of invasive cervical cancer.

The expanded program will focus on women who are at high risk because of age or other factors and who are less likely to be tested because of low income. The American Cancer Society estimates that only 20% of American females above the age of nineteen receive a PAP test regularly.[1] Applying this figure in Virginia to the 1,656,400 women aged 16 or older, only 330,000 now receive an annual PAP test. Approximately 80 percent of these women obtain their annual PAP test in private offices and clinics. The Virginia State Department of Health has no exact data to document either the numbers or characteristics of women who receive regular PAP tests in the private sector.

A total of 85,000 females, however, are being tested now in local health department clinics through the Chronic Disease Control Program's cervical cytology screening activities. The constraints of the program assure

[1] Facts and Figures on Uterine Cancer Control—Let No Woman Be Overlooked". American Cancer Society, New York, 1972.

that virtually all are characterized by low income. At present these 85,000 women represent 21% of the total number of medically indigent females in the Commonwealth.

The goals of this program over the next three years are: (1) to test 82% of the medically indigent population at least once through Health Department and American Cancer Society programs, and (2) to provide at least one additional routine test for 35% of medically indigent females.

Specific Objectives

The above mentioned goals will be met in part through existing State Health Department cervical cancer screening resources, and in part through funds made available under an expected $1,000,000 Federal grant. The specific objectives for the work to be carried out under this contract are as follows:

a. Continue the present State cervical cancer screening volume at its present rate of growth over the next three years (10 per cent per annum). With the current volume of 85,000 slides during FY 1974 the totals during the period of the grant should approximate 93,500 (FY 1975), 103,000 (FY 1976), and 113,300 (FY 1977).

b. To provide during the first year of the project a PAP test for an additional 65,000 women, primarily in lower socioeconomic groups, who have not had a PAP test within 12 months, by providing:

(1) A PAP test for 15,000 women attending public venereal disease clinics.

(2) A PAP test for 50,000 women through special PAP campaigns in local communities throughout the Commonwealth.

c. To provide during the second year of the project a PAP test for an additional 45,000 women who have not had a PAP test within the previous two years, and to provide a repeat PAP test for 20,000 women who had normal tests during the previous year.

d. To provide during the third year of the project a PAP test for an additional 42,000 women who have not had a PAP test within the previous three years, and to provide a repeat PAP test for 23,000 women who had normal tests during the previous two years.

e. To encourage, particularly through community PAP campaigns, the testing of socioeconomic women in the 35 to 65-year age bracket.

f. To ensure that follow-up tests are provided to no fewer than 95 percent of the women with suspicious (Class III) laboratory findings.

g. To ensure that definitive diagnostic tests are provided to 100% of women with two successive suspicious (Class III) tests or an initial positive (Class IV or V) test.

h. To ensure that 85 percent of all women with suspicious (Class III) laboratory findings receive annual medical examinations, including PAP tests.

i. To ensure that financial barriers to testing, diagnosis, treatment, and rehabilitation are removed for all persons requiring these services.

j. To encourage all women receiving tests to have annual medical examinations, including PAP tests.

k. To actively utilize PAP campaigns as a means of entry for lower income women into the health care system.

We have assumed, for planning purposes, that all women tested in local health department clinics will be medically indigent, but that 10% of those tested in public clinics during special PAP campaigns will not be. Constant evaluation will take place in terms of meeting immediate objectives and long-range goals.

Mental Health . . . .

An Analysis of the Patient Population in a Small State-Run Mental Hospital

H. BRUML, PH.D.
L. COPEN

This study analyzes the sex, age, discharge diagnosis, and readmission rate of the first 1000 admissions to the Northern Virginia Mental Health Institute. The aim of the study is twofold: first, to determine if a State can provide facilities for its emotionally ill comparable to private facilities and, second, to provide data which could be of help to administration in terms of promoting more effective treatment procedures and identifying vulnerable patient groups. Such data could provide a base from which recommendations for intervention and aftercare support could be made.

Because the philosophy, physical setting, staffing and admission criteria closely resemble those of a private institution, rather than those of a large public hospital, it was of interest to see if the patient population also coincided. The Institute has six twenty-bed inpatient units, each staffed by a team consisting of a psychiatrist, a social worker, a half-time psychologist, a registered nurse and several psychiatric nursing aides. The Institute serves a suburban area which contains a few urban and rural segments; it is located in a modern one story building in a residential neighborhood adjacent to a general hospital. There are no outer walls, fences or lot demarcations. Except for three seclusion rooms, patients find no locked doors. Patients get passes for work, various appointments, weekends at home and many drive their own cars.

Patients must be at least sixteen years of age and not require custodial care. Alcoholics, drug addicts and severely mentally retarded are admitted only for coexistent acute mental illness. The maximum length of stay for any person is six months; however, the average stay is 46 days. Thus, the setting, treatment, staffing and admission criteria bear closer resemblances to private rather than state institutions. Survey of the professional literature disclosed the data summarized in Table 1.

TABLE 1

Private and Public Facilities

Source	Private Facilities	Public Facilities
	Age Ranges	
Bloom	Peaking 20-64 years	Number of patients increasing with age
Kramer	Peaking 35-45 years	Number of patients increasing with age
DHEW[a]	----------	Number of patients increasing with age
NVMHI[b]	Peaking 18-45 years	----------
	Diagnoses	
Source	Private Facilities	Public Facilities
Bloom	Functional Disorders Neuroses	Organic Brain Syndrome
KRAMER	Schizophrenia Depressive Disorders	Organic Brain Syndrome Schizophrenia
DHEW	----------	Organic Brain Syndrome Alcoholism Schizophrenia
NVMHI	Schizophrenia Neuroses Depressive Neuroses Personality Disorders	----------

[a]U.S. Department of Health, Education, and Welfare.

[b]Northern Virginia Mental Health Institute.

Private Hospitals.

Age: In a comparative study of public and private hospitals in Pueblo, Colorado, Bloom (1970)[2] noted a greater proportion of patients

BRUML, H., PH.D., *Chief Psychologist, Northern Virginia Mental Health Institute.*

COPEN, L., *Volunteer, Northern Virginia Mental Health Institute.*

Approved for publication by the Commissioner, Department of Mental Health and Mental Retardation.

in the 20-64 year old age range. Bloom's study was geographically limited; however, using nationwide figures, Kramer (1970)[3] found a peaking of patients in the 35-45 year range.

Diagnoses: Bloom found that private facilities have more patients classified under Neuroses and Functional Disorders. Kramer supports his findings by noting an insignificant amount of Organic Brain Syndromes, the same amount of Schizophrenia, Fewer Alcoholic Disorders, and three times as many Depressive Disorders as the state and county hospitals had.

Public Hospitals.

Sex: Most of the literature lists a 2:1 ratio of females to males whether the facility is public or private. The only exception, (NIMH study, 1971)[4], showed a higher proportion of males in public facilities. This may be explained by the inclusion of Alcoholism, Organic Brain Syndromes and Personality Disorders which have an overall higher male incidence. In Functional Disorders and Neuroses, a larger proportion of female patients was shown[5].

Age: Bloom and Kramer noted that age patterns of patients in public facilities showed a direct line relationship with advancing age. Nationwide figures of state and county mental hospitals (1971)[6] support these findings, showing an increase of patient population up to the age of 65 with a drop in numbers in patients over 65. The drop is accounted for by the exclusion of state nursing homes statistics from their figures.

Diagnoses: Bloom stated that public facilities have more patients classified under Organic Brain Syndromes than under the other disorders. Kramer similarly noted that public facilities have a large amount of Organic Brain Syndrome diagnoses as well as the same amount of Schizophrenia as private facilities have, and an insignificant amount of Psychoneurotics. The national figures of the Biometry Branch of the U.S. Department of Health, Education, and Welfare (1971)[4] show a high rate of schizophrenic patients (50.3 per 100,000 population) and a high rate of Organic Brain Syndromes and Alcoholism (68.7 per 100,000 population).

Results

Files of the first 1000 admissions (from 1968-1970) to the hospital were examined and the following data were recorded: sex, age, discharge diagnosis and readmission rate.

Sex and Age:

Of the 1000 patients, seventy percent were female and thirty percent were male. In the previously quoted literature, a similar ratio of females to males (2:1) in other hospitals was noted. Data on sex of patients within age groups are presented in relation to this ratio.

Originally, data were collected on seven age groups (Fig. 1). The age of the total population was skewed toward the younger and middle age patients. When the age groups were analyzed by sex, the male population tended to be younger (peaking in the 18-25 age range), whereas the female population tended to be older (peaking in the age range of 26-35).

For the tabular presentation, the data were condensed into four age groups: below 26, 26-35, 36-45 and above 45 (Table 2). The percentage of the male population decreased with age and the percentage of the female population increased with age.

Discharge Diagnoses:

The diagnostic categories were based on the American Psychiatric Association's classification system (1968)[7]. The analysis was twofold: (a) on the major types (Tables 3, 5, and 8); and (b) on the subtypes within each category (Tables 4, 6, and 9). Major categories and subtypes are presented in separate tables for reasons of clarity.

As seen in Tables 3 and 4, the largest percentage of patients were diagnosed under Schizophrenia (43%)—with Paranoid Schizophrenia and Chronic Undifferentiated Schizophrenia being the largest subtypes, Neuroses (20%)—with Depressive Neuroses making up

the largest part, and Personality Disorders (11%).

Figure I

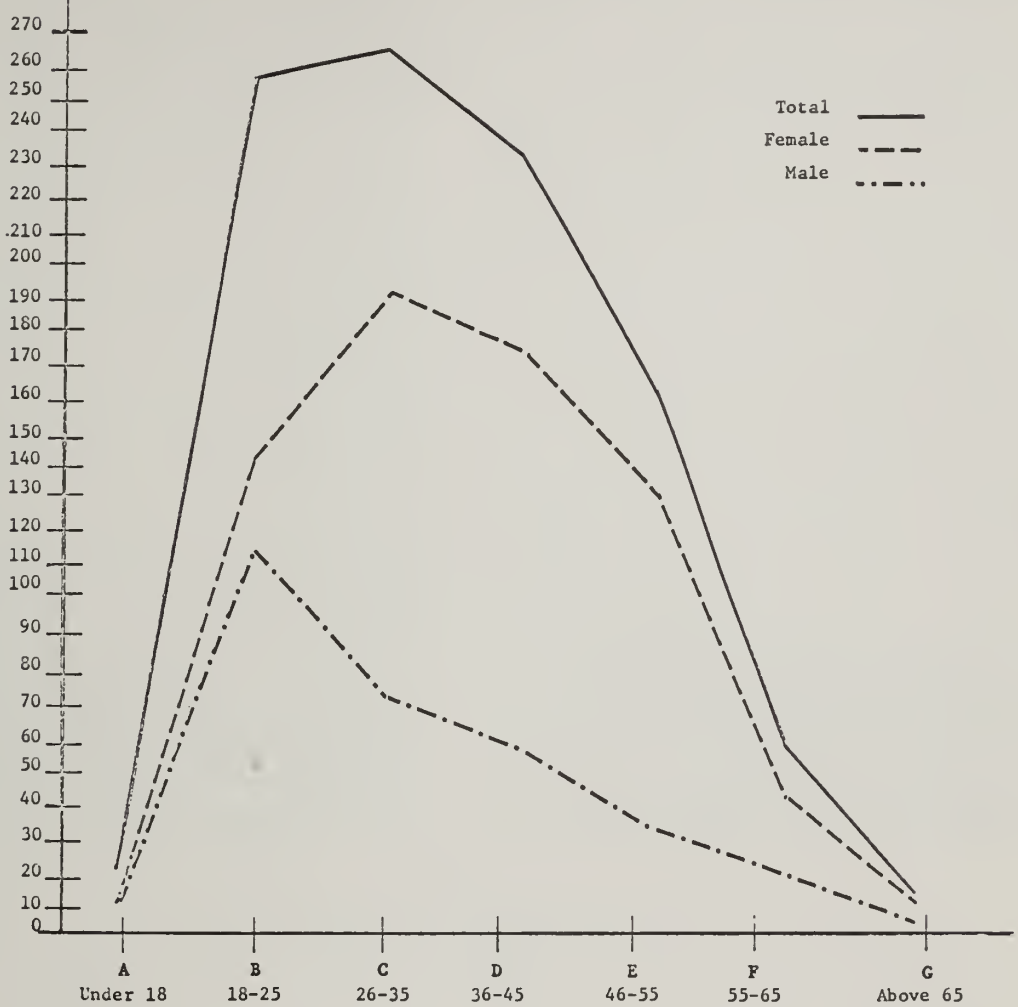


TABLE 2

Population by Sex and Age

Populations	Percentages Male	Female
Patients under 26	45	55
Patients 26-35	27	73
Patients 36-45	24	76
Patients over 45	22	78
All patients	30	70

Sex and Diagnostic Categories: Fifty percent of the male population was diagnosed as Schizophrenic as compared with forty percent of the female. Eighteen percent of the males were diagnosed under Neuroses and 21 percent of the females. Among the male population, thirteen percent suffered from a Personality Disorder compared to eleven percent of the females.

Sex and Diagnostic Subtypes: The three largest subtypes were Depressive Neurosis (18%), Paranoid Schizophrenia (15%) and Chronic Undifferentiated Schizophrenia (14%). Of the male population, eleven percent were diagnosed under Depressive Neurosis compared with nineteen percent of the females. Twenty percent of the males and thirteen percent of the females were Paranoid Schizophrenics. Among the male population,

seventeen percent were diagnosed under Chronic Undifferentiated Schizophrenia and thirteen percent of the females.

Comparing female/male ratios within subtypes to the overall 7:3 ratio, females are proportionately higher in Hysterical Personality Disorder (95%), Involutional Melancholia (82%) and Schizo-Affective Disorders (86%), although these subtypes are based on small portions of the population. In the subtypes of Schizoid, Explosive and Anti-Social Personality Disorders, males account for 75%

TABLE 3

Population by Sex and Diagnoatic Categories

Diagnostic Groups	Total N	Male N	Male %	Female N	Female %
Schizophrenia	432	150	50	282	40
Neuroses	198	53	18	145	21
Peraonality Disorders	114	40	13	74	11
Major Affective Disorders	83	21	7	62	9
Transient Situational Disturbances	31	11	3	20	3
Organic Brain Syndrome	29	6	2	23	3
Paranoid States	21	2	1	19	3
Psychotic Depressive Reaction	21	3	1	18	3
Alcoholism	14	5	2	9	1
Drug Dependence	11	2	1	9	1
Others[a]	10	1	--	9	1
Unknown	39	6	2	33	4
All Admissions	1003	300	100	703	100

Note--The total number of diagnosea (including the number of patients for whom there were no discharge data available) exceeds the number of patients studied (1000). This is due to the fact that one patient, under the same admission number, had been readmitted three timea, and given a discharge diagnosia each time.

[a]The categories which made up less than one per cent of the total population (mental retardation, paychophysiological disorders, special symptoms, behavior disorders, and social maladjustment) have been placed together as "others".

TABLE 4

Population by Sex and Diagnostic Subtypes

Diagnostic Groups	Total N	Male N	Male %	Female N	Female %
Depressive Neurosis	176	45	11	131	19
Paranoid Schizophrenia	147	59	20	88	12
Chronic Undifferentiated Schizophrenia	140	52	17	88	12
Schizo-Affective Schizophrenia	73	10	3	63	9
Involutional Melancholia	49	9	3	40	6
Hysterical P.D.[a]	38	2	1	36	5
Manic Depressive Reactions	34	12	4	22	3
Acute Schizophrenic Episode	30	12	4	18	2
Latent Schizophrenia	26	11	4	15	2
Reaction to Adult Life	26	8	3	18	2
Passive-Aggressive P.D.	25	11	4	14	2
Schizoid, Explosive & Antisocial P.D.[b]	24	18	6	6	1
Inadequate P.D.	18	6	2	12	2
Total[c]	806	255	82	551	77

[a]The abbreviation, P.D., stands for Personality Disorders.

[b]The Schizoid, Explosive, and Antisocial Personality Disorders have been placed together for numerical reasons and also because of the preponderance of males in each subtype.

[c]Not all of the study population are included in this Table. However, the percentages are based upon the full male population of 300 and the full female population of 700.

TABLE 5

Population by Age and Diagnostic Categories

Diagnoses	Below 26 N	Below 26 %	26-35 N	26-35 %	36-45 N	36-45 %	Above 45 N	Above 45 %
Schizophrenia	149	35	128	30	97	22	58	13
Neuroses	29	15	58	29	61	31	50	25
Personality Disorders	55	48	37	33	21	18	1	1
Major Affective Disorders	0	0	2	2	9	11	72	87
Transient Situational Disturbances	12	39	11	35	7	23	1	3
Organic Brain Syndrome	4	14	7	24	8	28	10	34
Paranoid States	0	0	3	14	6	29	12	57
Psychotic Depressive Reaction	2	9	4	19	6	29	9	43
Alcoholism	0	0	3	21	6	43	5	36
Drug Dependence	5	46	0	0	4	36	2	18
Others	4	40	4	40	0	0	2	20

Note--The percentages are of each diagnostic category. Due to rounding off, they do not always add up to 100.

of the population; but again, as noted in the N Columns of Table 4, the proportion of the total population is small.[8]

Changes in Diagnoses with Age: There are definite changes in age patterns within the diagnostic categories and subtypes (Tables 5 and 6). There is a descending percentage of patients with advancing age in Schizophrenia; that is, the youngest population has the highest percentage of Schizophrenia and this percentage decreases with age. The same descending pattern is seen under Transient Situational Disorders and Personality Disorders but with more exaggerated pattern in the latter. The reverse order of age pattern is seen under Major Affective Disorders and Organic Brain Syndrome. Neuroses shows still another pattern with the highest percentage in the 36-45 age range.

Table 6 shows a particularly steep descent under the subtypes of Chronic Undifferentiated Schizophrenia, Hysterical Personality Disorder, Acute Schizophrenic Episode and Latent Schizophrenia. The same pattern is noted under Passive-Aggressive Personality Disorder and Inadequate Personality Disorder, however the N's are small. The reverse pattern is found under Manic-Depressive Illness where the largest proportion is in the oldest (above 45) category.

Figure 2 shows the proportion of diagnoses within each age group. For clarification purposes, only the major diagnostic categories are included in this figure and the age groups are further condensed into three: below 26, 26-45 and above 45. While the diagnosis of Schizophrenia is highest among the younger two age groups, the Major Affective Disorders became the highest diagnostic category in the above 45 group. While the Diagnosis of Neuroses is highest among the 26-45 year age group and accounts for 21.7% of the oldest age group, only 10.6% of the youngest group of patients were given this diagnosis. The category of Personality Disorders was a reversed age pattern to that of the diagnostic category of Major Affective Disorders in the below 26 and above 45 age groups; the former is highest among the youngest group and the latter is highest among the oldest group.

Sex, Age and Diagnosis: A more extensive analysis of diagnostic subtypes reveals some interesting sex differences as well as actual reversals of the 7:3 female/male ratio, particularly in the below 26 age group. Of the Paranoid Schizophrenics below 26 years of age, 70%

TABLE 6

Population by Age and Diagnostic Subtypes

Diagnoses	Below 26		26-35		36-45		Above 45	
	N	%	N	%	N	%	N	%
Depressive Neuroses	27	15	45	27	54	31	48	27
Paranoid Schizophrenia	37	25	47	32	36	25	27	18
Chronic Undifferentiated Schizophrenia	64	46	32	23	26	18	18	13
Schizo-Affective Schizophrenia	17	23	25	34	23	32	8	11
Hysterical P.D.	17	45	16	42	5	13	0	0
Manic Depressive Reactions	0	0	1	3	5	15	28	82
Acute Schizphrenic Episode	14	47	11	37	3	10	2	6
Latent Schizophrenia	11	42	9	35	4	15	2	8
Passive-Aggressive P.D.	11	44	6	24	8	32	0	0
Schizoid, Explosive & Antisocial P.D.	14	58	8	33	2	8	0	0
Inadequate P.D.	11	61	6	33	0	0	1	6

Note--The percentages are of each diagnostic category. Due to rounding off, they do not always add up to 100.

were males; of those diagnosed under Chronic Undifferentiated Schizophrenia below 26, 61% are males. In the 26-35 age group within the subtype of Paranoid Schizophrenia, males still accounted for an unusually large proportion of the group (40%). However, in the two oldest groups having this diagnosis, the proportion of females became extremely heavy (80%). Similarly, under the subtype of Chronic Undifferentiated Schizophrenia, the females accounted for approximately 80% on each of the older three age groups.

Readmission:

Of the 1000 admissions studied, 483 were single admissions, i.e., were not rehospitalized at this Institute within the period studied. Seven hundred and forty six were admitted to this Institute for the first time. Of these, 35% (N=263) returned within the first three years of operation. Sixty-one percent of these 263 patients were single readmissions; 39% were readmitted more than once. Morton, Lantz and Halpern (1970)[9] noted a similar 40% readmission rate of patients who had returned to the hospital once.

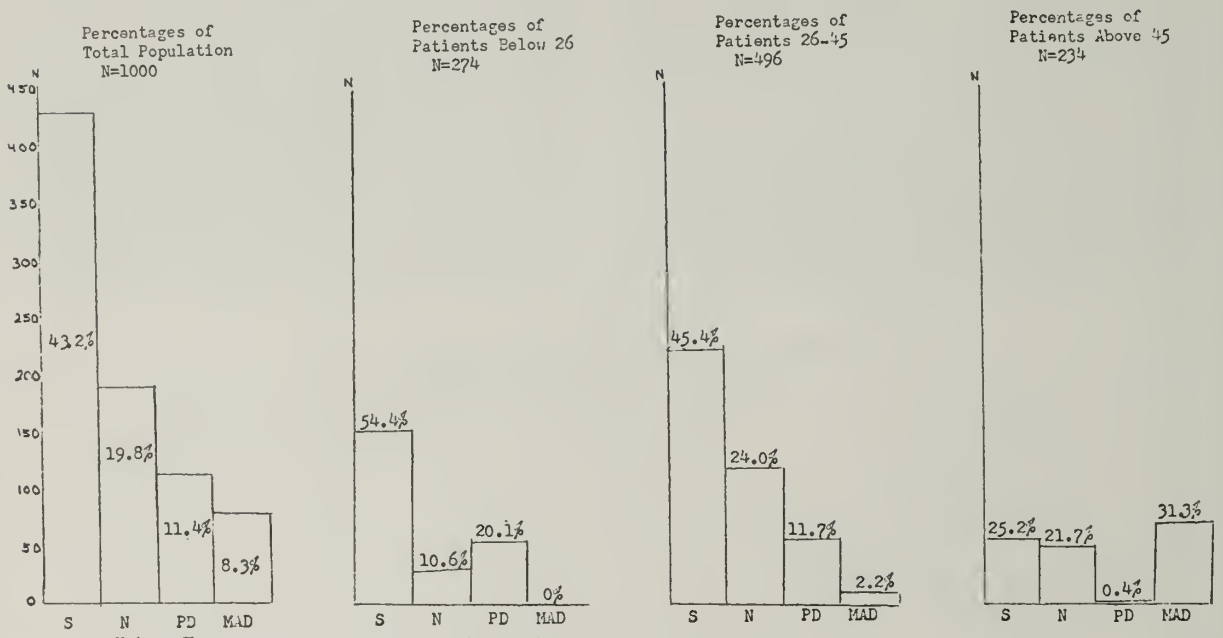
Sex, as an isolated factor, did not differentiate these groups. The readmission ratio between males and females corresponded closely with the general admission ratio.

Table 7, delineating the age and sex patterns in rehospitalization rates, shows a shift towards an increased rate of multiple admissions among the youngest group and a decrease among the oldest group, with hardly any changes in the two middle groups. This is consistent with the age patterns shown in Figure 1.

Kriss, Schiff and McLaughlin (1971)[10] found that the "rate of chronic hospitalization for patients 15-19 years old at first admission is over 20%, twice the average rate for patients 20-39". It must be noted that their "chronicity" is defined as a three-year continual hospitalization as opposed to our category of intermittent readmission as within a three year period[11]. However, the emphasis on younger

FIGURE 2

Patterns of Diagnoses in Age Ranges



Note.--The percentages of each age category do not add up to 100 since only four diagnostic categories are included here.

*Calculations are based on a different "N" for each graph.

KEY: S--Schizophrenia
N--Neuroses
PD--Personality Disorders
MAD--Major Affective Disorders

groups is similar, a fact mentioned often in the literature.

In another study, Jansen and Nickles (1973)[12] state that "age did not differentiate between single and multiple admission groups of either sex". It should be noted that their readmission group included both single and multiple readmissions; in this study there were interesting sex differences within two age groups (below 26 and above 45) in the multiple readmission category only (Table 7).

TABLE 7

Readmission By Sex and Age Percentages

Population	Below 26			26-35			36-45			Above 45			
	T	M	F	T	M	F	T	M	F	T	M	F	Total %
Single Readmission	24	9	15	23	5	17	27	7	20	26	8	19	100
Multiple Readmissions	31	16	15	29	9	20	25	5	20	15	3	12	100
All Patients	27	12	15	27	7	19	23	6	18	23	5	18	100

TABLE 8

Discharge Diagnoses and Rehospitalization

Population	Total	First Admissions Rehospitalized		Not Rehospitalized	
	N	N	%	N	%
Schizophrenia	311	128	41	183	59
Neuroses	153	51	33	103	66
Personality Disorders	76	21	28	55	72
Major Affective Disorders	65	26	40	39	60
Transient Situational	24	6	25	18	75
Organic Brain Syndrome	22	5	23	17	77
Paranoid States	18	6	33	12	66
Psychotic Depressive Reaction	18	6	33	12	66
Alcoholism	10	1	10	9	90
Others[a]	19	1	6	18	94

Note--Among the 746 first admissions, there were 30 with no discharge diagnoses available.

[a]Includes the categories of Mental Retardation, Drug Dependence, Psychophysiological Disorders, Special Symptoms, Behavior Disorders and Social Maladjustment.

The table shows that in the multiple readmission group, there are two significant factors: (a) a greater rehospitalization rate with a younger age at first admission and, (b) a larger proportion of young males and older females returning more than once.

Readmission and diagnoses: As seen in Table 8, the diagnostic categories of Schizophrenia, Major Affective Disorders and Neuroses have the highest readmission rate, although the Neuroses rate is lower than the 35% rate of all first admissions.

A similar analysis of subtypes indicated disorders with the highest rates of rehospitalization are Manic Depressive Illness, Paranoid Schizophrenia, Acute Schizophrenic Episode and Chronic Undifferentiated Schizophrenia

(Table 9). However, some subtypes must be read with caution due to the smaller N's.

Other notable figures are: (a) of the 41 male paranoid schizophrenics, 54% were rehospitalized; (b) of the 58 female paranoid schizophrenics, 41% were rehospitalized; and (c) of the 45 female schizo-affectives, 47% were rehospitalized.

TABLE 9

Diagnostic Subtypes and Rehospitalization

Population	Total N	First Admissions Rehospitalized N	%	Not Rehospitalized N	%
Depressive Neurosis	135	56	34	89	66
Chronic Undifferentiated Schizophrenia	104	35	34	69	66
Paranoid Schizophrenia	99	46	46	53	54
Schizo-Affective Schizophrenia	51	24	47	27	53
Involutional Melancholia	38	14	37	24	63
Hysterical Personality Disorder	30	5	17	25	83
Manic Depressive Psychosis	27	12	44	15	56
Acute Schizophrenic Episode	26	15	58	11	42
Latent Schizophrenia	21	6	29	15	71
Reaction to Adult Life	20	6	30	14	70
Passive-Aggressive	19	7	37	12	63
Inadequate Personality	11	4	36	7	64
Schizoid, Explosive & Antisocial P.D.	10	3	30	7	70

Conclusion

As documented in the introductory description of this Institution, the treatment, physical setting, staffing and admission criteria highlight the closer resemblance of this Institute to a private institution rather than a large public one. The age patterns and diagnoses of the patients also follow a private facility pattern (Table 1). Thus it would seem that a state can provide treatment for its mentally disturbed population without following custodial patterns found in large institutions.

By analysis of this data, administration may identify vulnerable populations requiring mental health services as the following: (a) younger males showing a proportionally high incidence of Paranoid Schizophrenia, Schizoid, Explosive and Anti-Social Personality Disorder, as well as a greater frequency of multiple readmission; and (b) females in the middle age group (25-45), suffering from Schizo-Affective Disorder, Involutional Melancholia and Hysterical Personality Disorder having a high rate of multiple readmission. The highest percentage of rehospitalized patients in the whole population was diagnosed as Schizophrenic and Major Affective Disorders. These groups have special needs for both intervention programs and follow-up support. It must be noted that these figures are based on the first 1000 admissions to this Institution. Because it was a new hospital, later studies may indicate a higher rate of readmission due to a larger pool of former patients.

Further data should be collected to increase the usefulness of such a study to long range administrative planning. There is a need for careful, continuous, up-to-date records of patients as well as follow-up data such as: (a) were first admissions previously hospitalized elsewhere?; (b) what happened to patients who never returned—were they hospitalized elsewhere or not?; did they have continuing therapy or not?; (c) regarding patients who did return here or elsewhere—what caused their readmission and what was the length of

time between admissions? There should be further detailed studies of the correlations between length of stay, length of time between admissions, and age, sex, diagnoses and readmission rates to reach better understanding of the data.

This analysis, although accomplishing our early aims, also led to other detailed questions which should be answered by further research.

References

1. Bloom, B. L.: Changing patterns of hospitalization for psychiatric disorders. Public Health Report 85: 81-7 Jan. 1970.
2. Jansen, D. G. & Nickles, L. A.: Variables that differentiate between single- and multiple-admission psychiatric patients at a state hospital over a 5 year period. J. Clin. Psychol. 29, 83-5, Jan. 1973.
3. Kramer, M. Problems in psychiatric epidemiology. Proc. Royal Society of Medicine 63, 553-62, June, 1970.
4. Kriss, A., Schiff, L., & McLaughlin, R.: Susceptibility to chronic hospitalization relative to age at first admission. Arch. Gen. Psych. 24: 346-352, April 1971.
5. Morton, W. D., Lantz, A., Halpern, J.: Readmission: Methodology and meaning. J. Fort Logan Mental Health Center 6 (1): 1-22, 1970.
6. Diagnostic and Statistical Manual of Mental Disorders. The Committee on Nomenclature and Statistics of the APA. Second Edition, p.3, 1968.
7. Statistical Note 39, U.S.D.H.E.W., National Clearinghouse for Mental Health Information, NIMH, OPPE, Biometry Branch, Survey and Reports Section, June, 1971.
8. Statistical Note 53, U.S.D.H.E.W., Public Health Service, Health Services and Mental Health Administration, NIMH, Biometry Branch, Survey and Reports Section, June, 1971.

The Wiskott-Aldrich Syndrome

The cooperation of physicians is requested in the referral of patients with the Wiskott-Aldrich syndrome to participate in the study of this rare disorder being conducted by the National Cancer Institute's Metabolism Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

The Wiskott-Aldrich syndrome is an affliction of male infants and children. It is characterized by chronic eczema, thrombocytopenia, hemorrhagic diatheses, and susceptibility to all forms of infections. The children also frequently develop autoimmune phenomena and lymphoid malignancy. Patients with this syndrome will be admitted for study of their immunologic and hematologic status in general and for evaluation of various modalities of therapy to be undertaken in consultation with the referring physicians.

Full reports of the studies performed will be made available and continuing consultation will be given if so desired by the referring physician.

Interested physicians may write or phone: R. Michael Blaese, M.D., or Thomas A. Waldman, M.D., Clinical Center, Room 4N-117, National Institutes of Health, Bethesda, Maryland 20014. (301) 496-6781.

Medicare—Part B . . . .

CURTIS J. KELLY, JD

In July, 1974, Part B of Medicare implemented a new pricing file based on charges made by physicians and suppliers for services rendered during calendar year *1973*.

A "customary charge" is established for each procedure code performed by a physician; but only if such services were billed to Medicare B at least three times by the same physician. From the customary charges so developed, and weighed by the frequency of services rendered by physicians in a broad specialty grouping within a service area, the prevailing charge is derived (but only when a minimum of three customary charges are established).

When physicians have established a customary charge, we must consider the lesser of (a) the actual charge made, (b) the customary charge, or (c) the prevailing charge, based on the 75th percentile, for reimbursement. If a physician has not established a customary charge for a particular procedure code, reimbursement is based on the lesser of (a) the physician's actual charge, or (b) the 50th percentile of the prevailing.

When a procedure code has not been performed with sufficient frequency during 1973 to establish a prevailing charge, payment is based upon the lesser of (a) the physician's actual charge, (b) the unit value of the procedure multiplied by the individual physician's customary conversion factor developed for each type of service, or (c) the prevailing conversion factor developed for the specialty grouping for the type of service involved.

Should you have any questions concerning reimbursement levels on a particular claim (*and providing you accepted the assignment of benefits*), please contact Travelers Medicare B *within six months of the date the check was issued.* In such correspondence, it would be helpful if you would include a copy of the Explanation of Medicare Benefits Form which accompanies your Medicare Check. In the absence of providing a copy of the Explanation of Medicare Benefits Form, please provide the beneficiary's name, Health Insurance Claim Number, and the Control Number of the particular claim. This information is available from the Explanation of Medicare Benefits Form.

Correspondence . . . .

The Fairfax Hospital Issue

To the Editor:

I read with interest your editorial in the Fairfax Hospital Issue of the Virginia Medical Monthly.

You referred to the address of the Fairfax Hospital, 3300 Gallows Road, as a credit to the founders of the institution in not changing the name to some "wishy-washy commonplace" designation.

In my travels I recalled a similar "robust" address in Belize, Central America. The address of the local hospital is Mortuary Lane.

FRANCIS H. MCGOVERN, M.D.

September 16, 1974
Danville, Virginia

Woman's Auxiliary . . . .

Irene Hoge—New President.

Wielding a gavel is not new to Irene Hoge as she has served as president of the Carolinas-Virginias Assembly of Nurse Anesthetists (1955-57), Duke University School of Anesthesia Alumnae Association (1966-68), Goochland County Chapter of the American Cancer Society (1964-65), Goochland County Garden Club (1966-68), Medical College of Virginia Faculty Women's Club (1970-71), Women's Auxiliary Richmond Academy of Medicine (1951-52 and 1969-70), and the Virginia State Association of Nurse Anesthetists (1959-60).

Born in Weldon, North Carolina, daughter of Mr. and Mrs. William E. Elks, Mrs. Hoge was orphaned at an early age. She entered Highsmith Hospital School of Nursing, Fayetteville, North Carolina, at the age of sixteen. After graduation, she nursed for a few years and then studied anesthesia at Duke University School of Anesthesiology, graduating in 1941. Following graduation, she went to the Medical College of Virginia, Richmond, as a staff nurse anesthetist later becoming chief nurse anesthetist. In 1945, Dr. Claude C. Coleman, professor of neurosurgery, persuaded her to be his private anesthetist, and that same year she and Dr. Randolph H. Hoge (now Emeritus Professor of Gynecology of the Medical College of Virginia) were married.

Although she has not practiced for several years, she has maintained a keen interest in anesthesia organizations on a regional, state, and national basis. She served from 1954 to 1974 (except for two years) as Exhibit Chairman for the Virginia-Carolinas Assembly of Nurse Anesthetists. She has also served on the Board of Trustees of the American Association of Nurse Anesthetists.

In medical professional organizations, she is a member of the Women's Auxiliary to the American Medical Association and to the Southern Medical Association. She has been a leader in putting on the annual Antique Show sponsored by the Women's Auxiliary to the Richmond Academy of Medicine. This show has won national attention and has earned large sums of money for charities and for worthy projects in the health field. Mrs. Hoge served from 1969 to 1972 as a Vice-Counselor of the Women's Auxiliary to the Southern Medical Association.

Mrs. Hoge has been a very active participant in all projects sponsored by the Faculty Women's Club of the Medical College of Virginia. Under her enthusiastic leadership a Women's Auxiliary for MCV Hospitals was formed, which was not confined to faculty wives, many Richmond women taking part. These women are now attempting to establish a gift shop for the hospitals. In 1967, Mrs. Hoge helped to organize the Women's Auxiliary of the Student Association of the American Medical Association, which wives of medical students overwhelmingly joined. The MCV Chapter is the first in Virginia.

Widespread and varied are Irene's interests: She is an active member of The Council of the Virginia Museum of Fine Arts and a member of the Goochland County Historical Society. She has worked with the committee for the proposed Virginia Science Museum, the American Cancer Society, the American Red

Cross and the Richmond Area Heart Association. At the Crippled Children's Hospital, Richmond, she is a member of its Board of Managers. Besides all these activities, she acts as nurse and secretary for Dr. Hoge at their home where he sees patients three days a week; yet, she finds time to entertain often at their Goochland County home, Longview.

At St. Mary's Episcopal Church, a member of its altar guild, she lends her talent for flower arranging.

Irene may be found any bright morning hoeing in her large vegetable garden, or weeding around flowers that grow luxuriantly under her green thumb. If not busy with these, she may be found in her kitchen busily freezing and canning vegetables from the garden, or cooking gourmet dishes.

Someone has said that if you want a job well done get a busy person to do it. If this be true, the new president should be outstanding. However, we would like to ask Irene one question, "When do you sleep?"

THELMA V. HOKE

LET'S REMINISCE!

Dr. Wm. F. Barr, Abingdon, Va.,

Who has been sick for the past six months, has improved enough to resume office practice, for which he will "receive gold, silver or greenbacks at par, or any other kind of good 'country produce' ".

(Virginia Medical Semi-Monthly, Vol. I, October 23, 1869)

LET'S REMINISCE!

No More Cigarettes in Tennessee.

The anti-cigarette bill (which prohibits absolutely the sale of cigarettes and of cigarette papers in the State of Tennessee after May 1st, 1897,) has unanimously passed the lower house of the Tennessee Legislature, and it is expected that it will pass the Senate.

(Virginia Medical Semi-Monthly, Vol. I, February 12, 1870)

Editorial . . . .

William R. Hill, M.D., President

DR. WILLIAM R. HILL, who was chosen president-elect at the annual meeting of The Medical Society of Virginia in Norfolk last fall, will become the one hundred and twentieth president of the Society when we meet in Williamsburg this November. Actually there have been 127 elections in the past 153 years of the Society's existence but seven presidents have served more than one term in this illustrious office.

WILLIAM R. HILL, M.D.

Dr. Hill has the added distinction of having first seen the light of day in the Old North State. The State of North Carolina has been a little stingy in years past by not encouraging their physicians to migrate to, or linger in, Virginia. We are glad an exception was made in the case of Bill Hill for our gain has been our sister state's loss.

He was born on October 4, 1908, in Statesville, where he attended the public schools until he entered Davidson College in 1926. Four years later he was graduated with a Bachelor of Science degree. Unlike many North Carolinians of that era he did not travel farther north than Charlottesville where he took his medical courses and hospital training. After his graduation from the University of Virginia in 1934 he spent five years on the surgical service under Professor Edwin P. Lehman and completed his residency in 1939. He then served two years as instructor on the surgical staff at the University and in 1941 he came to Richmond where he became associated with the late Dr. A. L. Herring, Sr., and Dr. Ray C. Siersema at Grace Hospital, Richmond, in the practice of general surgery. When the 8th Evacuation Hospital was activated in 1942 at the University of Virginia Dr. Hill served as major and later as lieutenant-colonel. The 8th Evac saw continuous service in North Africa and the Mediterranean Theaters throughout American participation. He received the Bronze Star for meritorious service upon his discharge in 1946.

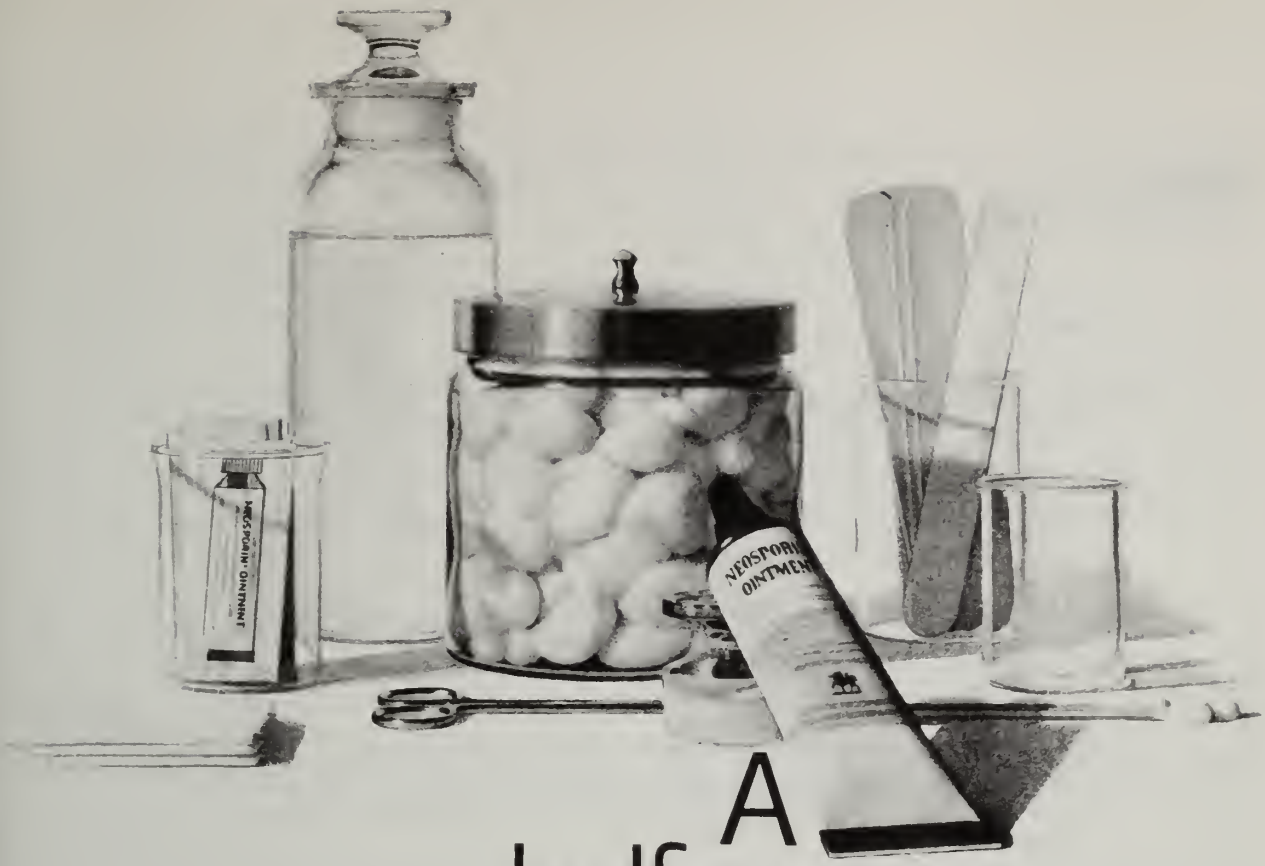
Dr. Hill resumed his practice in Richmond with Dr. Siersema and Dr. A. L. Herring, Jr., and has continued as attending surgeon at Grace Hospital with active privileges at the Richmond Memorial Hospital, St. Mary's Hospital, the Retreat Hospital, St. Elizabeth's Hospital, Henrico Doctor's Hospital and the Medical College of Virginia. His teaching activities include a surgical consultantship at the McGuire V.A. Hospital and a clinical professorship at the Medical College of Virginia.

He is a Diplomate of the American Board of Surgery, a Fellow of the American College of Surgeons and has membership in the Junior Clinical Club of Richmond, the Society of University Surgeons and the Excelsior Surgical Society. He has also been President of the Richmond Academy of Medicine, the Richmond Surgical and Gynecological Society and the Virginia Surgical Society.

Dr. Hill has long been active in advancing organized medicine. He has been Councilor to The Medical Society of Virginia from the Third District, Alternate Delegate from The Medical Society of Virginia to the American Medical Association and Delegate to the AMA. He has not permitted his interest on behalf of American medicine to lessen his zeal in adopting all that is good in the practice of surgery. His meticulous technic is exceeded only by his attention to the treatment of the individual patient. The devotion, in turn, shown by his patients to Dr. Hill, is the true index of the care he has expended upon them.

Dr. Hill has three children, Beverly Byrd Hill, Sherrard Steele Wilson and John P. Hill. He is married to the former Miss Elizabeth Broaddus of Glen Allen, Virginia.

H. J. W.



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started. In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare. Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced. Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.
Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome / **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

News . . . .

Calendar of Events

Virginia State Department of Mental Health and Mental Retardation—Williamsburg Conference Center—Williamsburg—November 25-26, 1974.

AMA Clinical Meeting—Portland, Oregon—November 30-December 4, 1974.

Air Pollution Medical Research Conference—Sponsored by AMA—Sheraton Palace Hotel—San Francisco—December 5-6, 1974.

Core Curriculum: Clinico-Pathologic Correlations in Cardiovascular Disease—Continuing Medical Education Program sponsored by American College of Cardiology—Williamsburg Conference Center—Williamsburg—December 5-8, 1974.

Problems of Cortical Function—Sponsored by Division of Pediatric Neurology of the University of Virginia, Medical College of Virginia and King's Daughters' Hospital—Cascades Convention Center—Williamsburg—December 6-8, 1974.

Alton D. Brashear Postgraduate Course in Head and Neck Anatomy—Postgraduate course sponsored by Medical College of Virginia—Approved for 40 elective hours by American Academy of Family Physicians and Academy of General Dentistry—Department of Anatomy—Medical College of Virginia—Richmond—January 20-23, 1975.

Virginia Lung Association—Williamsburg Lodge—Williamsburg—February 17-21, 1975.

First Annual Cancer Symposium at Walt Disney World—Contemporary Resort Hotel—Lake Buena Vista, Florida—February 19-22, 1975.

National Conference on Rural Health—Sponsored by American Medical Association—Hotel Roanoke—Roanoke—March 20-21, 1975.

Virginia Heart Association—Annual Meeting and Scientific Sessions—New Cavalier—Virginia Beach—May 12-13, 1975.

New Members.

The following doctors were received into The Medical Society of Virginia during the month of August:

Joseph A. Backer, M.D., McLean
Robert L. Barth, M.D., Falls Church
Alessandro G. Basso, M.D., Winchester
Yi-Nan Chou, M.D., Hopewell
Eleanor Freed Evans, M.D., Richmond
Ralph G. Fennell, M.D., Washington, D. C.
Douglas Fielder Greer, M.D., Falls Church
Roger Wayne Litwiller, M.D., Roanoke
Lucio Luccioli, M.D., Annandale
James Thomas Luck, M.D., Damascus
James Peter McMurrer, M.D., Washington, D. C.
Ganesh Nirmul, M.D., Suffolk
Jasodera Nirmul, M.D., Suffolk
Clifford T. O'Connell, M.D., Hampton
James Lloyd Patterson, Jr., M.D., Pulaski
Jackie Pujol, M.D., Vienna
Thomas Franklin Rand, M.D., Vienna
Harvey A. Schwartz, M.D., Alexandria
Roger Alan Snyder, M.D., Fairfax
Donald Michael Vickery, M.D., Reston

New Student Members, all from the Medical College of Virginia, Richmond, are:

Lee Allan Barbieri
William Nicholas Botts
Stephen Hampton Cox
Nancy Lee Durst
Rudolph Freeman, Jr.
Terrance Alan Fried
Eric Robert Frulnerg
George Ignaz Greenwald
Richard Lee Griffith, III
Robert George Hayward
Leonard Wayne Hess
Vaughan Henry Howard, Jr.
Ronald Stuart Jones
Sharon Elaine Lail
Howard Marc Lebow
Michael H. Link
Walter Palmer Lowery
Willis M. Madden
Rudolph M. Navari
Mitchell Crawford Reese
Leonard Nathan Slater
James Robert Smith
Thomas John Sobieski
Stuart Miley Solan
Camilla Buchanan Spirn
Stephen Edward Wiggins

The Northern Neck Medical Association

Met at Warsaw on August 21, with the president, Dr. Horace Kerr, presiding. Dr. Eugene Brand of the Northern Neck Mental Health Clinic discussed with the members the advancement of the mental health program in the Northern Neck.

The Fall meeting of this Association was held on October 24 at Tides Inn and the January 1975 meeting will again be held at Warsaw at Lowery's Restaurant.

The Southwestern Virginia Medical Society.

Officers for 1975 are: President, Dr. Morgan E. Scott, Radford; vice-president, Dr. David Brillhart, Abingdon; and secretary-treasurer, Dr. Thomas E. Donnelly, Roanoke. The Board of Directors are Drs. Charles Boatwright, Blacksburg; H. Max Landey, Marion; Coenraad Vuurmans, Fries; James L. Gardner, Abingdon; James L. Petterson, Jr., Pulaski; and John P. Judson, Blacksburg.

Roanoke Academy of Medicine.

New officers of the Academy, installed on October 14, are: President, Dr. W. W. S. Butler, III; president-elect, Dr. Lee W. Shaffer; vice-president, Dr. David P. Minichan, Jr., and secretary-treasurer, Dr. Preston B. Mayson, Jr.

American College of Cardiology.

The following members of The Medical Society of Virginia have been granted fellowships in the College: Dr. Alan G. Bartel, Norfolk; Dr. Richard M. Newton, Roanoke; Dr. Ivan Crosby and Dr. Harry A. Wellons, Jr., Charlottesville.

Edward Marion Holmes, Jr. Pavillion.

The Edward Marion Holmes, Jr. Pavillion at the Spain Rehabilitation Center in the University of Alabama in Birmingham was dedicated in September. The unique outdoor facility, both beautiful and practical, is designed primarily for recreation and fun for patients at the Center. It also has important therapy devices, including parallel bars for patients relearning to walk and weighted pulleys for arm muscle therapy.

The Pavillion was a dream of the late Dr. Holmes who was director of the Spain Center until his death in 1969. Dr. Holmes was formerly with the State and City Health Department in Richmond, Virginia.

Southern Medical Association.

The 68th Annual Scientific Meeting of the Association will be held in Atlanta, November 17-20. The meeting will feature scientific sessions of 21 medical specialties from allergy to urology. Some of the most distinguished physicians in the nation will be participating in the four-day program. There will be more than 200 scientific and technical exhibits which will be of major interest.

Dr. George J. Carroll, Suffolk, is president of the Association.

McGuire Lectures.

The Departments of Continuing Education, Obstetrics and Gynecology, and the H. Hudnall Ware, Jr., Society will present the McGuire Lecture Series at the Medical College of Virginia, December 5-6. This will be a postgraduate course on Advances in Obstetrics and Gynecology.

The second H. Hudnall Ware, Jr., Visiting Professor is Dr. Robert A. Munsick, Professor, Department of Obstetrics and Gynecology, University of Indiana Medical School. The McGuire Lecturer is Dr. Saul B. Gusberg, Professor and Chairman, Department of Obstetrics and Gynecology, Mount Sinai Medical School, New York. The guest faculty will be: Dr. Thomas P. Caine, Jr., Newport News; Dr. Elsie R. Carrington, Philadelphia; Dr. Charles B. Hammond, Durham, North Carolina; Dr. Georgeanna Seegar Jones, Baltimore; Dr. James D. Kitchin, III, Charlottesville; Dr. Luella Klein, Atlanta; Dr. John J. Mikuta, Philadelphia; Dr. Richard T. Upton, Portsmouth; and Dr. H. Oliver Williamson, Charleston, South Carolina. The Medical College of Virginia faculty will be: Dr. John A. Board; Dr. S. Edward Davis, III; Dr. Dean R. Goplerud; Dr. W. Glenn Hurt; and Dr. Warren H. Pearse.

Nine and one-half prescribed hours by the American Academy of Family Physicians have been applied for.

Medical Hypnosis.

The Department of Continuing Education of the Medical College of Virginia will present a post-graduate course on Medical Hypnosis, January 8, 15, 22 and 29, 1975. This is an eight-hour introductory course for physicians in hypnosis and its applications in the practice of medicine and is being sponsored by the Department of Psychiatry.

Staff Physician.

One admitting physician for night tour; one physician to work in the Ambulatory Care Service of a large active GM&S hospital, affiliated with the University of Virginia Medical School. Hospital adjoins the city of Roanoke on a 266-acre site in the beautiful Roanoke Valley between the Alleghany and Blue Ridge Mountains, with a valley population of approximately 250,000. Requires permanent visa or U.S. citizenship. Salary dependent upon qualifications. Contact Chief of Staff, VA Hospital, Salem, Virginia 24153. Equal Opportunity Employer. Telephone 703-344-2021, extension 252. (*Adv.*)

General Practice or Internal Medicine.

Three man group, guaranteed income. Small town in southwestern Virginia. For information contact Peter B. Lambert, Director, Norton Community Hospital, Norton, Virginia. Phone 703-679-1221. (*Adv.*)

Obituary . . . .

Dr. Brooke Baylor Mallory,

Lexington, died September 1, having suffered a heart attack while on a fishing trip. He was sixty-seven years of age and received his medical degree from the University of Virginia in 1935. Dr. Mallory retired from practice in 1973. He served as VMI post surgeon for twenty years, beginning in 1937 and serving continuously except when on leave of absence during World War II when he served for five years in the Army Medical Corps. The VMI physics building is named for his father who was connected with the college for more than fifty years. Dr. Mallory was a former president of the medical staff of Stonewall Jackson Hospital. Following his recent retirement his county society honored him with a resolution expressing "its esteem and appreci-

ation for his long, diligent and devoted service" to the society, the hospital and mankind. Dr. Mallory had been a member of The Medical Society of Virginia since 1936.

His wife, a son and a daughter survive him.

Dr. William Porter Sellers, III,

Norfolk, died June 4 at the age of sixty-three. He graduated from Johns Hopkins University School of Medicine in 1935. Following post-graduate studies in surgery he returned to Norfolk in 1938 and began his practice. Dr. Sellers was a member of the attending staff of DePaul Hospital. He served also on the staffs of Norfolk General, Leigh Memorial and King's Daughters Children's Hospitals. Dr. Sellers served in both the Public Health Service and the United States Navy during World War II. He had been a member of The Medical Society of Virginia for thirty-three years.

Dr. George Benjamin Carter,

Richmond, died September 6, after a long illness. He was fifty-seven years of age and received his medical degree from the University of Virginia in 1943. Dr. Carter was a member of several professional organizations and had been a member of The Medical Society of Virginia since 1952. He was formerly a member of the Virginia Historical Society.

His wife, three daughters and three sons survive him.

Dr. Joseph Anthony Provenzano,

Annandale, died August 25. He was fifty-one years of age and graduated from the Georgetown University School of Medicine in 1952. During World War II, Dr. Provenzano served as a medical corpsman in the Army; he was captured and spent 18 months in a German prisoner-of-war camp. For the past twenty years, he had practiced in Annandale. He was a former president of the Fairfax County Medical Society and the Fairfax Hospital. He was a member of The Medical Society of Virginia, having joined in 1956.

His wife, a daughter and four sons survive him.

Dr. Hurt.

Dr. Holcombe Harris Hurt was born March 1, 1901, in Blackstone, and died at his home in Lynchburg on July 1, 1974.

He spent his childhood with his parents in Blackstone, where he was graduated from High School in 1918. He attended college at the University of Virginia. He was graduated from the University of Virginia School of Medicine in 1924, afterward spending nearly five years in general practice in South Boston.

Yielding to his special interest in surgical problems, he sought and obtained a Fellowship in Surgery at the Mayo Foundation at the University of Minnesota, where in three years he obtained a Master of Science in Medicine.

Born and raised in Virginia, he was destined to become a dyed-in-the-wool Virginia Gentleman, and as it was the natural thing to him, he returned to Lynchburg to practice the specialty of general surgery.

Patriotism and the assumption of what he believed to be a personal responsibility led to his joining the Local National Guard in the years just preceding the entry of the United States into World War II with which unit he was called into active service in the United States Army where he served with distinction in the Medical Corps and rose to the rank of Colonel.

With this exception his entire active medical service life was spent ministering to the needs of the ill in his beloved Virginia.

He served as Chief of Staff of the Lynchburg General Hospital in 1947, was President of the Staff of Virginia Baptist Hospital in 1957, and second vice president of The Medical Society of Virginia in 1957. He was a Fellow in the American College of Surgeons, and a member of the American Medical Association, The Medical Society of Virginia, the Piedmont Medical Society and the Lynchburg Academy of Medicine.

He was a dedicated, totally honest master surgeon skillfully administering to rich and poor alike, always being guided only by what he felt was in the best interest of his patients.

We are proud to have been associated with him and feel that the Lynchburg Academy of Medicine and the people of this city and surrounding areas have suffered a grievous loss.

Very specially to those who knew him well, Holcombe was a man of great integrity and of strong convictions, always concerned about the present and the future of the country he revered and loved so well. He was a man of few words, but with profound perception of right and wrong, an unwavering friend to any one who sincerely sought his friendship and council. A

devoted father who inspired both his sons to follow in his foot steps in devotion to mankind in the field of the healing art of medicine.

It is a privilege, not without great sorrow, therefore, that we of this Committee submit this statement to the Lynchburg Academy of Medicine and request a copy be spread on the minutes of this meeting, and to The Medical Society of Virginia and to the members of the immediate family.

L. R. O'Brian, Jr., M.D., *Chairman*
Harold L. Riley, Jr., M.D.
Clarence E. Keefer, M.D.

Dr. Zimmerman.

No eulogy is needed for Dr. William Wallace Zimmerman III for his life spoke for itself, yet, at this time, we, the members of the Richmond Academy of Medicine desire to give expression to the love and appreciation held for him.

It was indeed a sad message which brought the news of his passing on June 9, 1974.

Dr. Zimmerman was a past president of the Cosmopolitan Club of Richmond. He was a member of the First Baptist Church. At the time of his death he was President of the Board of Directors of the Old Dominion Eye Bank and Research, Incorporated.

After attending Culver Academy, Earlham College and Indiana University at Bloomington, he received his M.D. degree from Hahnemann Medical College in Philadelphia. He served his residency in Ophthalmology at the Medical College of Virginia and the Eye Institute of New York. For thirteen years he had been a general practitioner in Purcellville, Virginia.

During World War II, Major Zimmerman served as Medical Chief of induction in Richmond. Later, in Italy, he was in charge of a hospital division.

He was a member of The Medical Society of Virginia, the Richmond Academy of Medicine, the State Board of Medical Examiners, and the Southern Medical Association. He was on the active staff of several local hospitals.

Dr. Zimmerman will long be remembered for his unselfish devotion to his work. He had indomitable, courageous determination with endless drive. There seemed to be too few hours in a day for him, therefore it was not unusual for him to bounce into the hospital or to his office as early as five o'clock in the morning to see his patients; there was that kind human warmth and selfgiving spirit ever reaching out to help. He was a generous and compassionate soul, yet most humble.

He was a dependable dedicated Christian with strong convictions. This faith was reflected in his daily work and gave added strength and courage to his family, his patients and his co-workers. Few knew the many acts of kindness and mercy rendered to the less fortunate. Indeed for eighteen years he gave of himself to the eye care and ocular surgical needs of the residents of the Virginia Baptist Home located at Culpeper, Virginia.

We like to remember his warm hand clasp, his affable personality and his radiant smile. There were times too, when the halls would echo the sound of his contagious laughter and all who heard would feel the better for it.

His passing leaves an ache in our hearts and his presence will be keenly missed. The field of ophthalmology could ill afford to lose such a man. He will be missed for his fine leadership and his generous spirit of cooperation, not to mention his zeal and unusual ability to teach those who were to follow in his profession.

Many are enjoying better vision because of his efforts in behalf of the services of the Eye Bank and ultimately the donation of his own eyes.

Our lives are richer for having known him and worked with him. Let us be grateful for the good that God was able to accomplish through his work. His life of faithful service; his organizational ability; his involvement in his work and organizations; his purposes and ideals, their effectiveness and usefulness serve better than words to characterize Dr. Zimmerman.

We extend our sympathy to his family. We request a copy of this tribute be sent to them and a copy be retained in our records.

L. Benjamin Sheppard, M.D.
Walter J. Rein, M.D.
Resolutions Committee

Kids' Stuff
Triaminic Syrup
the orange medicine from Dorsey
NDC 0943-0500-06
Oral Nasal Decongestant, Antihistaminic for stuffed and running noses
Dorsey
8 FL. OZ.
Dorsey
LABORATORIES
Division of Sandoz-Wander, Inc.
LINCOLN, NEBRASKA 68501
BL-SD

SHENANDOAH HOMES

Announces the opening of the all new

HOME FOR ADULTS

Serving Ambulatory Residents

Convalescent-Wheelchair-Disabled

Permanent or Temporary

- Supervised by a registered nurse—trained attendants on duty around the clock
- Balanced and nutritious meals—special diets provided
- Planned social and recreational programs
- Elevator service—no stairs
- Reasonable rates based on the amount of care required

SHENANDOAH HOMES

"A Non-Profit Organization of the Church of God"

5300 Hawthorne Road Roanoke, Virginia 24012

Phone 703-362-5412

BAYBERRY PSYCHIATRIC HOSPITAL

HAMPTON, VIRGINIA

Bayberry is a 125 bed private hospital which offers a wide range of inpatient, day care, outpatient, and consultative services, as well as treatment programs for adolescents, children, and alcoholics.

TREATMENT

After a comprehensive medical and psychiatric evaluation, each patient receives an individualized treatment program and schedule of activity therapies. Treatment may include individual therapy, group therapy, psychodrama, chemotherapy, electroconvulsive or insulin treatment.

EDUCATION

A regular school curriculum is followed and academic credit is given. The Hampton Roads Reading Center is located within the hospital and provides special instruction for children with dyslexia and other learning problems.

REHABILITATION

Rehabilitation services include individual counseling, special education, and job training programs.

ACCREDITATION

Accredited by the Joint Commission on Accreditation of Hospitals, approved for Medicare, member of the American Hospital Association, and licensed by the State Department of Hospitals and Mental Hygiene.

Wendell J. Pile, M.D.
Medical Director

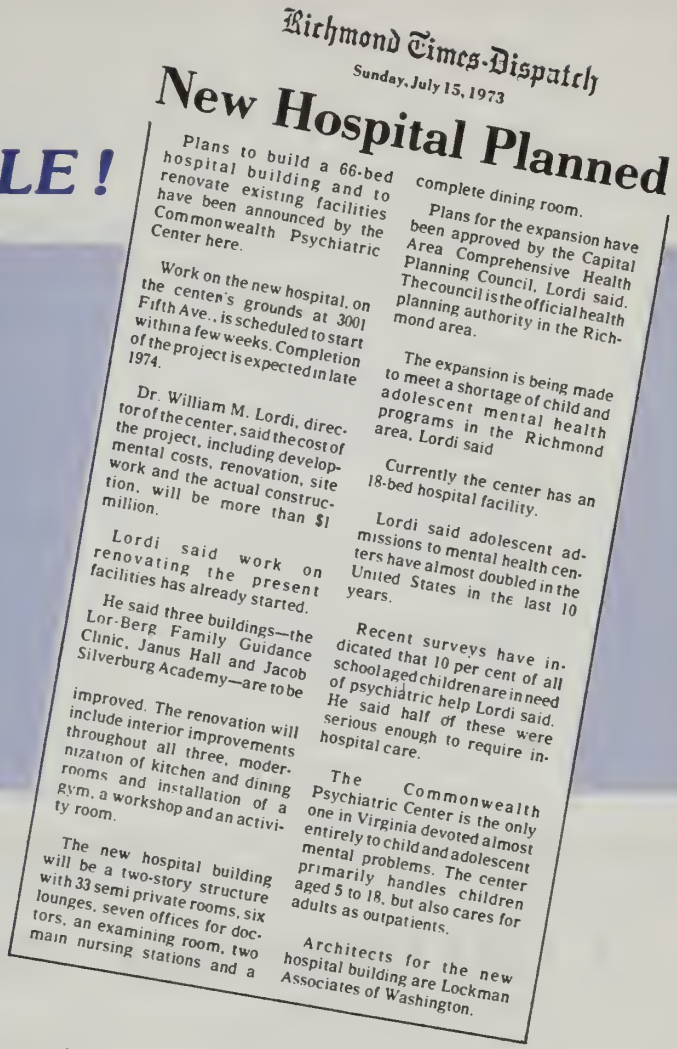
Howard L. Cox, M.D. Basil E. Roebuck, M.D. Jonathan G. Solomon, M.D., Ltd.

BROCHURE SENT ON REQUEST

Contact: Medical Director, 530 E. Queen Street, Hampton, Va. 23369
Telephone (804) 722-2504

NOW AVAILABLE !

Exclusively For Children and Adolescents-- A new, completely modern 66-bed hospital is now open for patient referrals



Richmond Times-Dispatch

Sunday, July 15, 1973

New Hospital Planned

Plans to build a 66-bed hospital building and to renovate existing facilities have been announced by the Commonwealth Psychiatric Center here.

Work on the new hospital, on the center's grounds at 3001 Fifth Ave., is scheduled to start within a few weeks. Completion of the project is expected in late 1974.

Dr. William M. Lordi, director of the center, said the cost of the project, including developmental costs, renovation, site work and the actual construction, will be more than $1 million.

Lordi said work on renovating the present facilities has already started.

He said three buildings—the Lor-Berg Family Guidance Clinic, Janus Hall and Jacob Silverburg Academy—are to be improved. The renovation will include interior improvements throughout all three, modernization of kitchen and dining rooms and installation of a gym, a workshop and an activity room.

The new hospital building will be a two-story structure with 33 semi private rooms, six lounges, seven offices for doctors, an examining room, two main nursing stations and a complete dining room.

Plans for the expansion have been approved by the Capital Area Comprehensive Health Planning Council, Lordi said. The council is the official health planning authority in the Richmond area.

The expansion is being made to meet a shortage of child and adolescent mental health programs in the Richmond area, Lordi said

Currently the center has an 18-bed hospital facility.

Lordi said adolescent admissions to mental health centers have almost doubled in the United States in the last 10 years.

Recent surveys have indicated that 10 per cent of all schoolaged children are in need of psychiatric help Lordi said. He said half of these were serious enough to require inhospital care.

The Commonwealth Psychiatric Center is the only one in Virginia devoted almost entirely to child and adolescent mental problems. The center primarily handles children aged 5 to 18, but also cares for adults as outpatients.

Architects for the new hospital building are Lockman Associates of Washington.

■ Work has just been completed on this new hospital, specifically designed for the treatment of the emotionally disturbed. In addition to the hospital itself, the Center is moving ahead with construction of a gymnasium and swimming pool to provide its patients with the very best of private institutional facilities in the Mid-Atlantic Region.

■ Four full-time child psychiatrists and a staff of experienced psychologists, psychiatric nurses, psychiatric social workers, therapists and other specialists offer a wide range of treatment modalities. A fully-accredited school program features small classes structured to meet the needs of the individual.

COMMONWEALTH PSYCHIATRIC CENTER

3001 Fifth Avenue
Richmond, Virginia 23222

Telephone (804) 329-4392

Brochure on Request

STUART CIRCLE HOSPITAL

413-21 Stuart Circle RICHMOND, VIRGINIA

Medicine:
Manfred Call, III, M.D.
Alexander G. Brown, III, M.D.
John D. Call, M.D.
Wyndham B. Blanton, Jr., M.D.
Frank M. Blanton, M.D.
William W. Martin, Jr., M.D.
James R. Wickham, M.D.

Obstetrics and Gynecology:
Spotswood Robins, M.D.
David C. Forrest, M.D.
Joseph C. Parker, M.D.
William M. Oppenhimer, M.D.

Orthopedics:
Beverley B. Clary, M.D.
James B. Dalton, Jr., M.D.
Franklin P. Watkins, M.D.

Pediatrics:
Edward G. Davis, Jr., M.D.
Thomas P. Overton, M.D.
Albert S. Thompson, Jr., M.D.
Edward J. Wiley, M.D.

Roentgenology and Radiology:
Hunter B. Frischkorn, Jr., M.D.
William C. Barr, M.D.
James W. Proffitt, M.D.

Anesthesiology:
William B. Moncure, M.D.
Heth Owen, Jr., M.D.

Surgery:
A. Stephens Graham, M.D.
Charles R. Robins, Jr., M.D.
Carrington Williams, M.D.
Richard A. Michaux, M.D.
Carrington Williams, Jr., M.D.
Armistead M. Williams, M.D.
James R. Darden, Jr., M.D.
Wyatt S. Beazley, III, M.D.

Urological Surgery:
Frank Pole, M.D.
Harry S. Rowland, Jr., M.D.

Plastic Surgery:
Hunter S. Jackson, M.D.

Ophthalmology, Otolaryngology:
Richard W. Dodd, M.D.
J. Warren Montague, M.D.

Pathology:
W. Scott Gilmer, Jr., M.D.

Physical Therapy:
William J. Cowan, R.P.T.

Director:
Charles C. Hough

ST. LUKE'S HOSPITAL

Established 1882
Hunter H. McGuire, M.D.

McGUIRE CLINIC, Inc.

Established 1923
Stuart McGuire, M.D.

1000 West Grace Street
Richmond, Virginia

General Surgery & Gynecology
Joseph W. Coxe, III, M.D.
H. Fairfax Conquest, M.D.
Gilbert H. Bryson, M.D.
William M. Crouch, M.D.

Anesthesiology
Beverley Jones, M.D.

Physical Therapy
Elizabeth L. Watson, R.P.T.

Internal Medicine
John P. Lynch, M.D.
John B. Catlett, M.D.
Robert W. Bedinger, M.D.
David L. Litchfield, M.D.
Burness F. Ansell, Jr., M.D.
W. Wayne Key, Jr., M.D.
Randolph M. Halloran, M.D.
Hilton R. Almond, M.D.
James A. Repass, M.D.

Radiology
Henry S. Spencer, M.D.
Donald P. King, M.D.

Isotopes
David L. Litchfield, M.D.

Pathology
Hubert R. White, Jr., M.D.

Hospital Administrator
Gerald J. LaGesse

Director of Nurses—St. Luke's Hospital
Ann M. Urbine, R.N.

School of Nursing
Ann M. Urbine, R.N., Director
Joan B. Hovis, R.N., Dir. of Ed.
Elizabeth H. Ellett, R.N., Instructor

Clinic Manager
S. Taylor Ware, Jr.

Director of Nurses—McGuire Clinic, Inc.
Mary E. Simmons, R.N.

TUCKER HOSPITAL Inc.

212 West Franklin Street

Richmond, Virginia

A private hospital for diagnosis and treatment of psychiatric and neurological disorders. Hospital and out-patient services.

James Asa Shield, M.D.
George S. Fultz, Jr., M.D.
Catherine T. Ray, M.D.
Weir M. Tucker, M.D.
James Asa Shield, Jr., M.D.

SAINT ALBANS

PSYCHIATRIC HOSPITAL

Radford, Virginia

STAFF:

William D. Keck, M.D.
Morgan E. Scott, M.D.
David S. Sprague, M.D.
Delano W. Bolter, M.D.
Edward E. Cale, M.D.
Terkild Vinding, M.D.
James P. King, M.D. (Emeritus)

Clinical Psychology:

Thomas C. Camp, Ph.D.
Carl McGraw, Ph.D.
Allen S. Rowe, Ph.D.

George K. White
Administrator
Richard A. Kennedy, Jr.
Asst. Administrator

ANNOUNCING THE OPENING OF

THE WADDELL CENTER

for Alcohol and Related Problems

112 Painter Street 703 236-2994

GALAX, VIRGINIA 24333

Walter K. Helton, M.Div., Director

- Twenty-Eight day residential program
- Services for men & women
- Detoxification available
- Telephone consultation encouraged
- Quiet neighborhood on the rim of the Blue Ridge

Pulaski

Home For Adults

★ Newly remodeled and decorated
★ Private & semi-private rooms
★ Assistant on duty 24 hours a day
★ Medical facilities near by
★ Reasonable rates, $250 & up.

Write or phone for further information: P.O. Box 938, Pulaski, Va. 24301 or phone 980-2200.

Russ Penner,
Business Manager

Tidewater Psychiatric Institute

1701 Will-O-Wisp Drive
Virginia Beach, Virginia 23454

and

1005 Hampton Boulevard
Norfolk, Virginia 23507

Private hospitals for the treatment of psychiatric disorders of adults and adolescents, alcoholism, and drug addiction. Residential special education for emotionally disturbed adolescents.

David C. Butler
Administrator

Julian W. Selig, Jr., M.D.
Hospital Director, Norfolk

Stuart Ashman, M.D.
Hospital Director, Virginia Beach

(Brochure sent on request)

"Gentlemen, congratulations are in order."

"A.H. Robins asked me ompare the banana flavor of their nnagel® -PG with the real thing and, ove, I couldn't tell the difference. even in sip-by-sip comparison. azing!

"There's no unpleasant egoric taste because there's no egoric. Clever, wouldn't you say? ead, A. H. Robins uses the thera- ic equivalent, powdered opium, romote the production of formed stools and lessen the urge. And Donnagel-PG also provides the demulcent-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of belladonna alkaloids.

"But what I find most impressive is the skillful manner in which A. H. Robins has combined these ingredients with that delicate flavor of vintage bananas. Smashing, absolutely smashing!

"May I propose a toast?"

A·H·ROBINS

A. H. Robins Company, Richmond, Virginia 23220

Donnagel®-PG. ℞

Donnagel with paregoric equivalent

Each 30 cc contains

Kaolin	6 0 g.
Pectin	142 8 mg
Hyoscyamine sulfate	0.1037 mg
Atropine sulfate	0 0194 mg
Hyoscine hydrobromide	0 0065 mg
Powdered opium, USP	24 0 mg
(equivalent to paregoric 6 ml) (warning may be habit forming)	
Sodium benzoate (preservative)	60 0 mg

Alcohol, 5%

℞ Available on oral prescription or without prescription in compliance with applicable state and local law

Robitussin
Robitussin A-C
Robitussin DM
Robitussin-PE
Cough Calmer

A·H·ROBINS

IN COUGHS OF COLDS, 'FLU, AND U.R.I.: CLEAR THE TRACT WITH THE ROBITUSSIN® LINE

Fall and winter coughs are back. Time to help clear the lower respiratory tract with the five Robitussins and Cough Calmers. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For unproductive coughs

ROBITUSSIN®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Alcohol, 3.5%

For severe coughs

ROBITUSSIN A-C® ℃

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Codeine phosphate ..... 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

ROBITUSSIN-DM®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Dextromethorphan hydrobromide ..... 15 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

COUGH CALMERS®

Each Cough Calmer contains:
Glyceryl guaiacolate ..... 50 mg.
Dextromethorphan hydrobromide ..... 7.5 mg.

Clears nasal and sinus passages as it relieves coughs

ROBITUSSIN-PE®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Phenylephrine hydrochloride ..... 10 mg.
Alcohol, 1.4%

MEET THE NEWEST MEMBER OF THE LINE

Comprehensive decongestant action helps control cough and clear stuffy nose and sinuses. Non-narcotic.

ROBITUSSIN®-CF

Each 5 cc. contains:
Glyceryl guaiacolate ..... 50 mg.
Dextromethorphan hydrobromide ..... 10.0 mg.
Phenylpropanolamine hydrochloride ..... 12.5 mg.
Alcohol, 1.4%

Select the Robitussin® formulation that treats your patient's individual coughing needs:	Expectorant-Demulcent	Cough Suppressant	Long-Acting (6-8 hours)	Nasal Sinus Decongestant	Non-Narcotic
ROBITUSSIN®	●				●
ROBITUSSIN A-C®	●	●			
ROBITUSSIN-DM®	●	●	●		●
ROBITUSSIN-PE®	●			●	●
ROBITUSSIN®-CF	●	●		●	●
COUGH CALMERS®	■	■	■		■

A. H. Robins Company, Richmond, Va. 23220

Fourth Decade of Nursing

Accredited by the Joint Commission on Accreditation and Certified for Medicare

MRS. PLYLER'S NURSING HOME

KATE E. PLYLER (1876-1947) GENE CLARK REGIRER (1912-1962)

A private nursing home dedicated to extended, intermediate and custodial care

1615 Grove Avenue, Richmond, Virginia, Telephone 353-3981

Virginia is for lovers:
History lovers, sports lovers, antique lovers, garden lovers, food lovers, mountain lovers, beach lovers. Whatever it is you fancy, you can tickle your fancy here.

Visit, write or call Virginia State Travel Service, 9th & Grace Streets, Richmond 23219, phone (703)770-4484.

This advertising is published by Virginia Medical Monthly as a public service.

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

For the Discriminating Eye Physician

Depend on the Services of a Guild Optician

IN LYNCHBURG, VA.

A. G. JEFFERSON INC.

Main Office
Allied Arts Buildings

Branch Office
2010 Tate Springs Road

REGISTERED OPTICIANS

WE DO NOT PRESCRIBE GLASSES—
WE MAKE THEM

YOU CAN SEE STANMAR HOMES in Alabama, Arkansas, Colorado, Conn., Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, N. Carolina, Ohio, Pennsylvania, Rhode Island, S. Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Canada, Puerto Rico and The Virgin Islands.

the custom home that doesn't cost more

Every Stanmar home is individualized to fit your needs, your site, and your budget.

If you are planning to build a primar residence or leisure home, send $2.00 for our full color brochure, "New Directions in Home Design".

stanmar inc

Box 0-46, Sudbury, MA 01776 (617) 443-9922
ATLANTA • BOSTON • NEW YORK

for your information...
Peoples Drug Stores stocks
the complete assortment of

Almay Hypo-Allergenic Cosmetics

So you're not allergic to makeup. Why take chances? Almay hypo-allergenic cosmetics are so pure they make your world seem lots cleaner. And so fashionable they make you feel like a born leader. A world of beautiful eye makeups in the cleanest greens, the purest plums, the clearest blues. Pure Beauty Face Makeup, to create a soft, glowy complexion that looks born to you.

Dozens of delicious, stainlessly pure Color-Moist Lipsticks. High-Frost Nail Enamels, dazzling *and* dermatologist recommended. Deep Mist total skincare, because skin is where pure begins. (If you're a one-cream woman, you can't do better than Deep Mist Moisture Cream to cherish you day and night.)

Come see the Almay Collection. Everything fashion-lovers dream of. Only purer. Think pure. Think Almay, world's leading authority in hypo-allergenic cosmetics.

At the purity place . . .

PEOPLES® DRUG STORES

SAVE MONEY!

Take advantage of The Medical Society of Virginia-sponsored Master Retirement Plans

Mail coupon for information

MSV RETIREMENT PLANS

2425 Wilson Boulevard, Arlington, Va. 22201

Please send information regarding:

( ) Self-employed Retirement Plan

( ) Professional Corporation Retirement Plans

( ) Tax-deferred annuity plan for employees of private non-profit organizations

Name _____

Address _____

Phone _____

REPRINT PRICES OF ARTICLES IN THE VIRGINIA MEDICAL MONTHLY

NEW PRICES EFFECTIVE JANUARY, 1974

Trim Size: 8¼ x 11 Inches

No. of Copies	100	200	250	500	750	1000	1500	2000
1 page	$ 9.95	$10.70	$11.05	$12.85	$14.65	$16.45	$20.05	$23.65
2 pages	11.35	12.25	12.70	14.95	17.20	19.45	23.95	28.45
4 pages	23.80	26.05	27.20	32.70	38.25	43.80	54.90	66.00
8 pages	55.05	57.65	59.00	65.55	72.10	78.65	91.75	104.90
12 pages	89.60	95.05	97.80	111.45	125.10	138.75	166.05	193.35
16 pages	110.10	115.35	118.00	131.10	144.20	157.30	183.55	209.75
Cover	18.25	22.40	24.50	34.80	44.95	55.50	88.20	96.90
Envelope—blank	3.35	6.70	8.40	16.80	25.20	33.60	50.40	67.20
Envelope—printed	9.60	13.40	15.25	24.85	34.30	43.90	63.00	82.10

PRICES F.O.B. RICHMOND, VA.

Orders Must Be Placed Before Type Is Distributed

THE WILLIAMS PRINTING CO.

5203 Hatcher Street P.O. Box 1419 Richmond, Virginia 23211

Oriental Rugs

My name is Amir Zinat; I am Iranian. Years ago as a graduate student in the U.S., I noticed the big difference in the price of Orientals in my homeland and here. So I asked my people to send me many rugs. I have chosen, as my business, to sell these rugs at more reasonable prices. These rugs may be exchanged, are guaranteed to increase in value, are selected by natives, and the price is fully refundable.

If you are purchasing an Oriental rug, you need to learn about them. Mistakes can be costly; so know some facts before you buy:

1. There are many rugs around which may look similar to Persian ones and may be named Iranian-sounding names to confuse you. Look for the label, "Made in Iran".
2. Even all genuine Orientals are not Persian and not necessarily what you have learned about their value and durability.
3. Stores and auctioneers often sell unauthentic or worn-out Persian rugs for far too much. A good Iranian rug is not out of reach, and if it is genuine it will hold or increase its value.
4. Do not count much on the words, Princess, Contract, Signed, Collector's Item, Royal, Imperial, Prayer, etc. They are all part of a sales pitch or gossip. Rugs are named by the village or, more often, the region of origin. The quality of the rug may vary greatly regardless of the name. So, you should judge a rug by its own individual merits, not by the name.

I would be happy to help you learn more about Orientals and assist you in any way in your selection.

Roller-type Loom

Please call **358-1711**
also recommend me to your friends
Thank you
Amir Zinat

2002½ Staples Mill Road
Richmond, Virginia

(on the back side of Cross Roads Shopping Center)

A resource for therapies, including a school for emotionally disturbed children

The Human Resource Institute of Norfolk offers individualized treatment programs within a therapeutic community to all ages and diagnostic categories of mentally and emotionally disturbed adults, adolescents, and children. By utilizing various individual and group therapies the patient becomes aware of his own feelings and his relationship to others. The diversified therapies increase the individual's self-esteem and encourage him to function in an effective manner.

An intensive program of community activities offered through the Creative Services Department promotes interpersonal relationships among patients and staff, and stimulates the patient's creative potential. Activities such as dance therapy, recreational therapy, occupational therapy, psychodrama, music therapy, and personal appearance therapy are individualized according to the patient's needs.

An integral part of treatment for the emotionally disturbed adolescent or child is the continuance of his education in a therapeutically controlled environment. HUMAN RESOURCE ACADEMY, a fully licensed and certified school, promotes learning with teachers specially trained in teaching the emotionally disturbed and learning disabled students.

Pharmaceutical therapy and close association with consultant physicians of all specialities are important aspects of patient care at Human Resource Institute.

To find out more about our comprehensive program contact the Co-Medical Directors, Dietrich W. Heyder, M.D., F.A.P.A., or Fathy A. Abdou, M.D., F.A.P.A.. Human Resource Institute of Norfolk, Human Resources Building, 100 Kingsley Lane, Norfolk, Virginia 23505. Phone (804) 489-1072.

OFFICERS AND COUNCILORS OF THE MEDICAL SOCIETY OF VIRGINIA 1973-1974

President—John A. Martin, M.D., Roanoke *President-Elect*—William R. Hill, M.D., Richmond
Past-President—Carl E. Stark, M.D., Wytheville
Vice-Presidents—1st: Raymond S. Brown, M.D., Gloucester 2nd: James C. Respess, M.D., Charlottesville
3rd: James S. Kitterman, M.D., Norfolk

Executive Vice-President—Robert I. Howard, Richmond
State Commissioner of Health—Mack I. Shanholtz, M.D., Richmond
Editor, "Virginia Medical Monthly"—Harry J. Warthen, M.D., Richmond
Speaker of the House—William J. Hagood, Jr., M.D., Clover
Vice Speaker—K. K. Wallace, Jr., M.D., Virginia Beach

COUNCILORS	(District)	VICE-COUNCILORS
Harold L. Williams, M.D., Newport News	1st	Walter A. Eskridge, M.D., Parksley
Charles E. Davis, Jr., M.D., Norfolk	2nd	Gervas S. Taylor, Jr., M.D., Norfolk
Carrington Williams, Jr., M.D., Richmond	3rd	Charles M. Caravati, Jr., M.D., Richmond
George J. Carroll, M.D., Suffolk	4th	Gordon G. Birdsong, M.D., Franklin
Girard V. Thompson, Sr., M.D., Chatham	5th	Anthony J. Munoz, M.D., Farmville
H. C. Alexander, III, M.D., Roanoke	6th	Douglas E. Pierce, M.D., Roanoke
George M. Nipe, M.D., Harrisonburg	7th	Harry L. Westfall, Jr., M.D., *Fredericksburg*
Thomas L. Lucas, M.D., Alexandria	8th	Harry C. Kuykendall, M.D., Alexandria
James Hal Smith, M.D., Christiansburg	9th	Joseph H. Early, Jr., M.D., Hillsville
W. Leonard Weyl, M.D., Arlington	10th	C. Barrie Cook, M.D., Fairfax

DELEGATES AND ALTERNATES TO AMERICAN MEDICAL ASSOCIATION

Delegates—1973-1974
W. Callier Salley, M.D., Gloucester Point

1974-1975
William S. Hotchkiss, M.D., Norfolk
Michael A. Puzak, M.D., Arlington

Alternates—1973-1974
Percy Wootton, M.D., Richmond

1974-1975
F. Ashton Carmines, M.D., Newport News
Carl E. Stark, M.D., Wytheville

INDEX TO ADVERTISERS

Abbott Laboratories ---- 969
Bayberry Psychiatric Hospital ---- 1000
Burroughs-Wellcome ---- 993
Commercial Insurance ---- 922
Commonwealth Psychiatric Center ---- 1001
David Dyer Ins. ---- 919
Dorsey Laboratories ---- 933, 999
Human Resources Institute of Norfolk ---- 1013
Jefferson, A. G. ---- 1009
Johnston-Willis Hospital ---- 1009
Eli Lilly and Co. ---- 938
McNeil Laboratories, Inc. ---- 937
W. F. Merchant Pharmaceutical Co. ---- 920-921
Merck, Sharp & Dohme ---- 930-931, 932
Newport News Shipbuilding ---- 920
Oriental Rugs ---- 1012
People's Service Drug Stores ---- 1010
Pharmaceutical Manufacturers Assn. ---- 928, 929
Philip Morris ---- 920
Plyler's Nursing Home, Mrs. ---- 1008
Pulaski Home ---- 1004
Reed & Carnrick ---- 923
Retirement Plan ---- 1011
A. H. Robins Company ---- 1005, 1006, 1007
Roche Laboratories ---- 2nd Cover, 917, 926, 927, 934, 935, 3rd and 4th Covers
Saint Alban's Psychiatric Hospital ---- 1003
Searle ---- 970, 971
Shenandoah Homes ---- 1000
Smith, Kline & French ---- 972
St. Luke's Hospital ---- 1002
Stanmar, Inc. ---- 1009
Stuart Circle Hospital ---- 1002
Tidewater Psychiatric Institute ---- 1004
Tucker Hospital, Inc. ---- 1003
U. S. Air Force Medical Service ---- 924
Virginia National Bank ---- 936
Virginia Travel Service ---- 1008
Waddell Center ---- 1004
Wallace Pharmaceuticals ---- 924, 925
Williams Printing Company ---- 1011

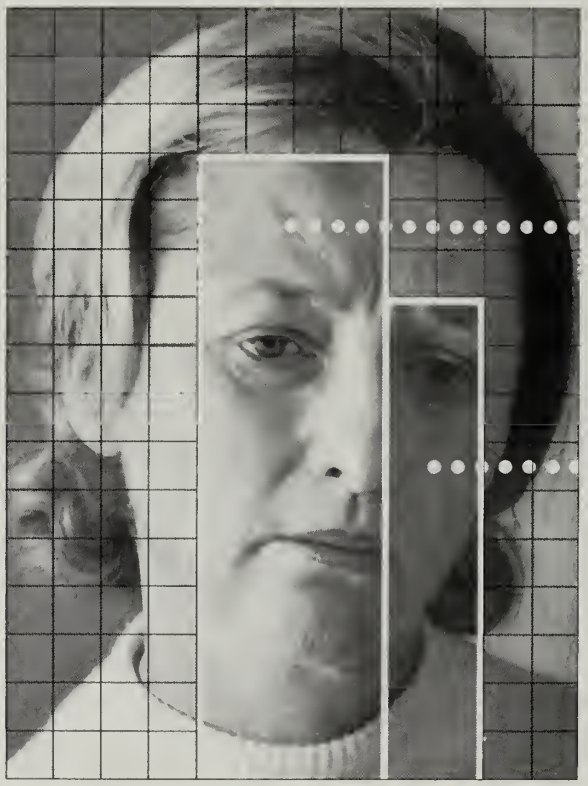
OFFICIAL PUBLICATION
OF THE
MEDICAL SOCIETY
OF VIRGINIA

THE FRANCIS A. COUNTWAY

Virginia Medical Monthly

December, 1974 Volume 101

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequ and/or severity of grand mal seizures require increased dosage of standard convulsant medication; abrupt withdr may be associated with temporary increase in frequency and/or severity o seizures. Advise against simultaneous gestion of alcohol and other CNS depr sants. Withdrawal symptoms (similar those with barbiturates and alcohol) h occurred following abrupt discontinua (convulsions, tremor, abdominal and cle cramps, vomiting and sweating). addiction-prone individuals under ca

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
DEC 20 1974

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

urveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

VIRGINIA MEDICAL MONTHLY

(Founded by Landon B. Edwards, M.D., April, 1874)

PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF VIRGINIA

4205 DOVER ROAD, RICHMOND, VIRGINIA 23221

EDITORIAL BOARD

Harry J. Warthen, M.D.
Chairman and Editor

H. Lamont Pugh, M.D.

C. V. Cimmino, M.D.

John A. Owen, Jr., M.D.

Gordon W. Jones, M.D.

William H. Kaufman, M.D.

Robert Mitchell, Jr., M.D.

W. Leonard Weyl, M.D.

Fred J. Spencer, M.D.

Robert L. Cassidy, M.D.

E. Spencer Watkins
Managing Editor
4205 Dover Road
Richmond, Virginia 23221
Telephone 353-2721

Annual Subscription—$4.00
Single Copies—50¢

GUEST EDITORIALS
American Medicine: A Paradox—*Eugene Reyes Perez, M.D.* 1031
Spanish Flux—*William H. Harris, Jr.* 1034

ORIGINAL ARTICLES
Presidential Address—*John A. Martin, M.D.* 1036
Eastern State: America's Oldest Public Hospital—*James S. Howard, III, M.D.* 1043
The Radiographic Innominate Lines of the Scapular Spine—*William P. Harbin* and *Christian V. Cimmino, M.D.* 1050

CANCER TRENDS
Bone Scanning in Clinical Oncology—*Charles D. Teates, M.D.* and *James G. Hunter, Jr., M.D.* 1054

SURGICAL GRAND ROUNDS
Legal, Moral and Ethical Dilemmas in the Newborn Nursery 1059

PUBLIC HEALTH
Lead Poisoning Detection 1066

MENTAL HEALTH
Chemotherapy and Coordinated Community Care in Reducing Rehospitalization of Schizophrenics—*Edwin S. Zolik, Ph.D.*, and *Irving Levin* 1068

THE MEDICAL SOCIETY OF VIRGINIA
Minutes of Council 1074

WOMAN'S AUXILIARY 1080

EDITORIAL
Paré—*Gordon W. Jones, Jr.* 1081

NEWS 1083

OBITUARY 1086

INDEX TO VOLUME CI 1088

The Monthly is not responsible for the opinions and statements of its contributors.
All advertisements are accepted subject to the approval of the Editorial Board.
$4.00 of membership dues is payable for one year's subscription to The Virginia Medical Monthly.

Second Class Postage paid at Richmond, Virginia.

INDEX TO ADVERTISERS—1104

THE GREATEST SINGLE THREAT
TO YOUR FINANCIAL STABILITY IS

DISABILITY!

NOW YOU CAN INSURE AGAINST THAT THREAT

**IMPORTANT NEW IMPROVEMENTS
HAVE JUST BEEN MADE**

Now for a very modest premium you can have an income up to $2,000 a month if you are disabled and unable to practice. Plus under the new "Add-On" Supplement, another $1,000 a month after a 365 day waiting period. With the 10% claim bonus now in force the total is $3,300 a month!

OTHER FEATURES

- Survivor's benefits at no increase in premium
- Conversion privilege to age 65
- Coverage anywhere in the world, 24 hours a day, 365 days a year
- Special low-cost plan designed for the younger doctors
- Renewable to age 75
- Few exclusions—even private flying is included
- Pays in addition to any other insurance you may carry.

You can receive information immediately by writing or phoning (collect) the administrator. A minute of your time now will provide you and your family an income when it's needed most.

Program administered by:

David A. Dyer & Associates

Roanoke, Virginia 24011
Call Collect: (703) 344-5000

FRED W. HALL
Northern Representative
8924 Orange Hunt Lane
Annandale, Virginia 22003
Call: 978-8087

FRED E. HAMLIN, JR.
Associate

DAVID A. DYER & ASSOCIATES has been awarded the seal of the American Institute of Professional Association Group Insurance Administrators. Membership in this group is by invitation only.

Other Group Plans for Your Protection

1. ****Daily In-Hospital (pays up to $200 a day directly to you)* (Lifetime Renewable)**
2. **Major Hospital Nursing**
3. **$250,000 Excess Major Medical (Lifetime Renewable)***
4. ****High Limit Accidental Death & Dismemberment plus Permanent Total Disability Benefits (up to $250,000)***
5. **Professional Overhead Expense (up to $3,500 monthly)**
6. ****Guarantee Issue Life Insurance***
7. **Special Income Protection***
8. **Disability Income Plans for Employees**

*Guarantee Issue **Available to Employees

These plans are IDEAL for INDIVIDUALS, PARTNERSHIPS and CORPORATIONS

When a cough spoils your patient's day...

Triaminic® Expectorant

Each teaspoonful (5 ml.) contains:

Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg.; pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.); glyceryl guaiacolate, 100 mg.; alcohol, 5%.

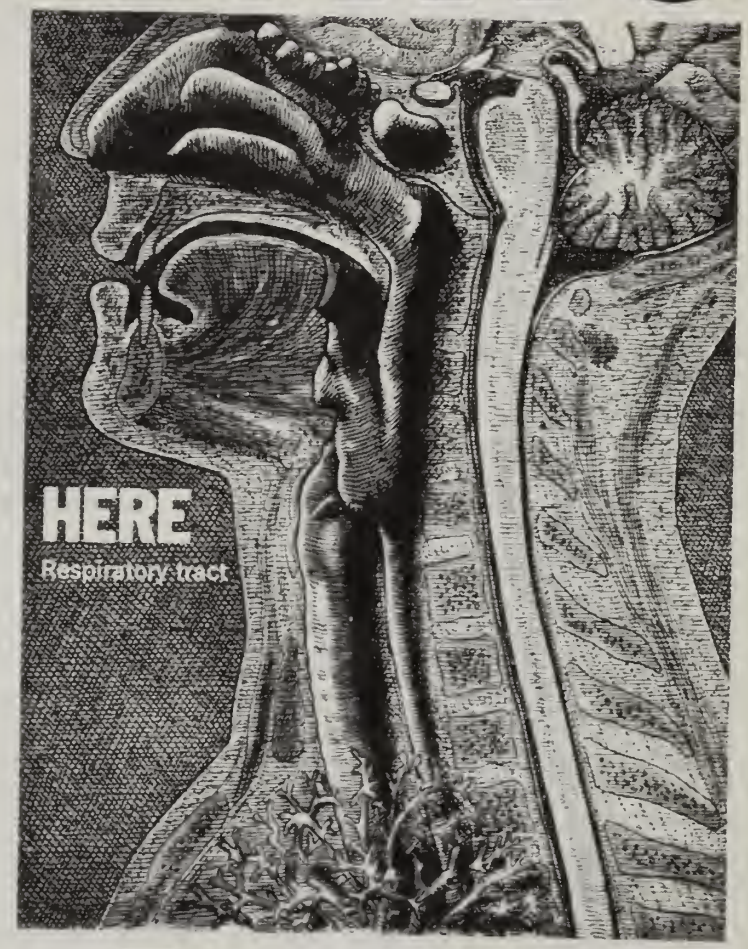
Available in 8-oz. Family Size and 4-oz.
No Rx needed—recommend over the phone.

The Adult Expectorant that is great for kids, too.

Dorsey Laboratories/Division of Sandoz-Wander, Inc./Lincoln, Nebraska 68501

BS-RD

WHEN FLU HITS AND HURTS



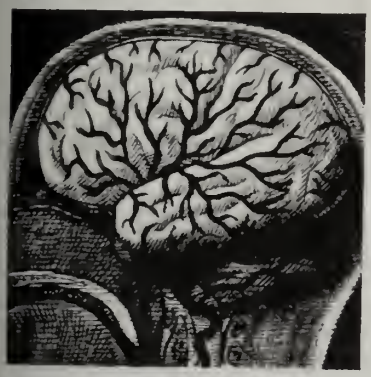
EMPIRIN® COMPOUND c̄ CODEINE

#3, codeine phosphate* (32.4 mg.) gr. ½
#4, codeine phosphate* (64.8 mg.) gr. 1

HERE Muscles and joints

Wherever it hurts, Empirin Compound with Codeine usually provides the symptomatic relief needed.

HERE Headache

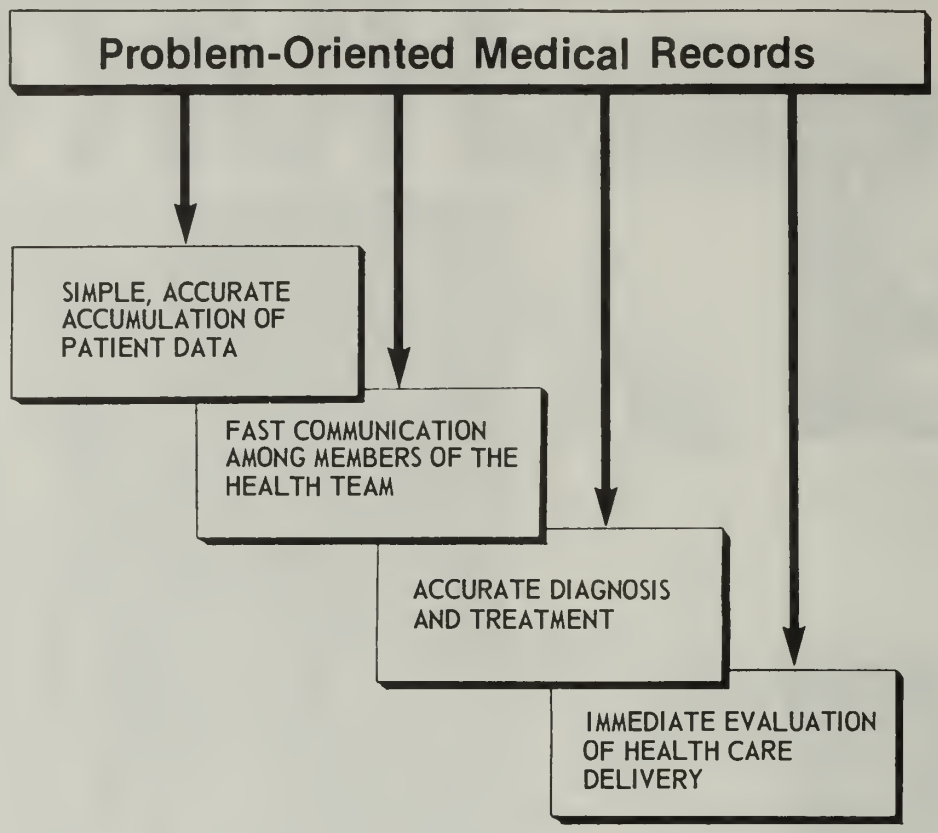


In flu and associated respiratory infection, Empirin Compound with Codeine provides an antitussive bonus in addition to relief of pain and bodily discomfort.

Ⓒ III **prescribing convenience:** up to 5 refills in 6 months, at your discretion (unless restricted by state law); by telephone order in many states.

Empirin Compound with Codeine **No. 3,** codeine phosphate* 32.4 mg. (gr. ½); **No. 4,** codeine phosphate* 64.8 mg. (gr. 1) *Warning—may be habit-forming. Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.

Wellcome | **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709



PROBLEM-ORIENTED MEDICAL RECORD CONCEPTS

By RICHARD E. EASTON, M.D., M.P.H., Director of Medical Education, Medical Center Hospitals, Inc.; Associate Professor of Community Medicine, East Virginia Medical School, Norfolk, Virginia.

1974 **158 pp., illus.** **$9.95, paper**

Modern delivery of health care is so complex, so detailed, that the most frequent and critical failures occur because of the absence of an adequate system of patient records to facilitate communication between members of the health team.

In PROBLEM-ORIENTED MEDICAL RECORD CONCEPTS Dr. Easton describes a system of record keeping, adaptable to any organizational setting, that is rational, simple and totally relevant to modern medicine. Using this system, all members of the health care team will have immediate access to the most relevant details of the patient's health problems.

The book is liberally illustrated, clearly written, and contains question and answer sections that summarize the content, while offering the reader the opportunity for immediate self-evaluation.

APPLETON-CENTURY-CROFTS
Medical/Nursing Publishers
292 Madison Avenue
New York, NY 10017

We are pleased to send you this book for a 30-day review. If you are not satisfied you may return the book, and the invoice will be cancelled.

PROBLEM-ORIENTED MEDICAL RECORD CONCEPTS, Easton A7941-6 $9.95

NAME

ADDRESS

CITY

STATE ZIP

☐ Check enclosed. (Publisher pays postage.)
☐ Bill me. VMM 12 74

The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23261

YOU CAN SEE STANMAR HOMES in Alabama, Arkansas, Colorado, Conn., Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, N. Carolina, Ohio, Pennsylvania, Rhode Island, S. Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Canada, Puerto Rico and The Virgin Islands.

the custom home that doesn't cost more

Every Stanmar home is individualized to fit your needs, your site, and your budget.

If you are planning to build a primar residence or leisure home, send $2.00 for our full color brochure, "New Directions in Home Design".

stanmar inc

Box 0-46, Sudbury, MA 01776 (617) 443-9922

ATLANTA • BOSTON • NEW YORK

Rondomycin®

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands, no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, Rondomycin® (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of Rondomycin® (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: Rondomycin® (methacycline HCl) 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512

When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

tudies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

The Role of the Detail Man

Opinion & Dialogue

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California

Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country, there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

Peoples...always ready to serve your patient...with all-night prescription center drug stores.

Southside Plaza/McGuire Circle at Belt Blvd. and Hall St., Richmond	BE 2-4566
Barracks Rd. Center/Emmett St. & Barracks Rd., Charlottesville	293-9151
Ward's Corner/Gramby St. & Little Creek Rd., Norfolk	588-5421
Boulevard and Broad Sts., Richmond	359-2497
Lee Highway & Old Dominion Dr.(Arlington)	522-0011
Park and Shop Shopping Center, US #1 by-pass at College Gate stoplight, Fredericksburg, Va.	(703)373-4607
Roanoke Tower Shopping Center Roanoke, Va.	(703)342-1877

. . . and 8 other stores in the Metropolitan Washington area.

In the small hours of the evening or morning—when your patient can't wait to have his prescription filled—call the Peoples pharmacist at one of the numbers listed here. He's ready to help when it's too early for anyone else to lend a hand.

He's a good man to know. Any time.

Since 1905, Peoples has filled over 150 million prescriptions. *The next one we fill is just as important to us as all those in between.*

PEOPLES DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.

SAVE MONEY!

Take advantage of The Medical Society of Virginia-sponsored Master Retirement Plans

Mail coupon for information

MSV RETIREMENT PLANS

2425 Wilson Boulevard, Arlington, Va. 22201

Please send information regarding:

( ) Self-employed Retirement Plan

( ) Professional Corporation Retirement Plans

( ) Tax-deferred annuity plan for employees of private non-profit organizations

Name _____

Address _____

Phone _____

Since 1878

Service with Satisfaction

THE WILLIAMS PRINTING COMPANY

RICHMOND, VIRGINIA 23211

Oriental Rugs

My name is Amir Zinat; I am Iranian. Years ago as a graduate student in the U.S., I noticed the big difference in the price of Orientals in my homeland and here. So I asked my people to send me many rugs. I have chosen, as my business, to sell these rugs at more reasonable prices. These rugs may be exchanged, are guaranteed to increase in value, are selected by natives, and the price is fully refundable.

If you are purchasing an Oriental rug, you need to learn about them. Mistakes can be costly; so know some facts before you buy:

1. There are many rugs around which may look similar to Persian ones and may be named Iranian-sounding names to confuse you. Look for the label, "Made in Iran".
2. Even all genuine Orientals are not Persian and not necessarily what you have learned about their value and durability.
3. Stores and auctioneers often sell unauthentic or worn-out Persian rugs for far too much. A good Iranian rug is not out of reach, and if it is genuine it will hold or increase its value.
4. Do not count much on the words, Princess, Contract, Signed, Collector's Item, Royal, Imperial, Prayer, etc. They are all part of a sales pitch or gossip. Rugs are named by the village or, more often, the region of origin. The quality of the rug may vary greatly regardless of the name. So, you should judge a rug by its own individual merits, not by the name.

I would be happy to help you learn more about Orientals and assist you in any way in your selection.

Roller-type Loom

Please call **358-1711**
also recommend me to your friends
Thank you
Amir Zinat

2002½ Staples Mill Road
Richmond, Virginia

(on the back side of Cross Roads Shopping Center)

Kids' Stuff

Triaminic Syrup
the orange medicine from Dorsey

Dorsey
LABORATORIES
Division of Sandoz-Wander, Inc.

Kefzol®
cefazolin sodium

Ampoules, equivalent to 1 Gm. of cefazolin

Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206
400380

The Virginia
MEDICAL MONTHLY

December, 1974
Vol. 101, No. 12
Whole No. 1471

Guest Editorials . . . .

American Medicine: A Paradox

> In no single thing do men approach the gods
> more nearly than in giving health to mankind.
> —Cicero

"THE AMERICAN DENTAL ASSOCIATION NEWS" recently published the results of a survey by two psychologists at the University of Maine on public attitudes toward the members of twenty different professions. The survey panel was composed of forty-eight blue collar workers, whose views presumably would be straight-forward and not influenced by interprofessional rivalries or jealousies. The results ranked the professions in the categories of truthfulness, competence, altruism, and power as follows:

Truthfulness	Competence
1. Clergymen	1. Physicians
2. Dentists	2. Dentists
3. Physicians	3. Clergymen
4. College professors	4. College professors
5. Judges	5. Lawyers
6. High school teachers	6. Psychologists
7. Psychiatrists	7. Judges
8. Psychologists	8. Psychiatrists
9. Plumbers	9. High school teachers
10. Law enforcement officials	10. Army generals
11. News Columnists	11. Executives of large corporations
12. TV news reporters	12. Plumbers
13. Lawyers	13. TV news reporters
14. Executives of large corporations	14. TV repairmen
15. Army generals	15. News columnists
16. TV repairmen	16. Law enforcement officials
17. Auto repairmen	17. Auto repairmen
18. Union officials	18. Union officials
19. Used car salesmen	19. Used car salesmen
20. Politicians	20. Politicians

Altruism	Power
1. Clergymen	1. Judges
2. Physicians	2. Physicians
3. Dentists	3. Clergymen
4. Psychologists	4. News columnists
5. College professors	5. TV news reporters
6. High school teachers	6. Lawyers
7. Psychiatrists	7. Politicians
8. Judges	8. College professors
9. Law enforcement officials	9. Law enforcement officials
10. TV news reporters	10. High school teachers
11. Lawyers	11. Psychiatrists
12. News columnists	12. Psychologists
13. Army generals	13. Dentists
14. Plumbers	14. Executives of large corporations
15. Auto repairmen	15. Army generals
16. TV repairmen	16. Union officials
17. Executives of large corporations	17. TV repairmen
18. Union officials	18. Auto repairmen
19. Politicians	19. Plumbers
20. Used car salesmen	20. Used car salesmen

By way of mitigation, it should perhaps be mentioned that the survey represents a generalization; not every physician is at the top, nor is every politician at the bottom. Another recent survey, sponsored by the National Science Foundation, found that medicine is the most prestigious profession. The survey asked a sample group of 2,200 adults to list nine professions in order of their esteem. Physicians were first, scientists were second, and clergymen third. In addition to the survey, a cursory probe of the historical record to the time of Hippocrates reveals that people have always trusted and admired the medical profession.

At the turn of the century the physicians of America became less reliant upon Europe and began laying the foundations for excellence that would later lead to American supremacy in medicine. The scientific advances made in medical care during this century border almost on the miraculous. Antibiotics, chemotherapy, drugs such as insulin, organ transplants, and the conquest of infectious diseases are just a few of the many distinguished chapters in the progress of medicine. Infectious diseases such as diphtheria, measles, whooping cough, polio, tuberculosis, and typhoid fever have almost been eradicated. The death rate in 1900 from pneumonia was 202.2 per 100,000 population, and tuberculosis was 194.4. In 1970 each had dropped to 28.6 for pneumonia and 2.7 for tuberculosis; certainly these are remarkable accomplishments. Because the advances are well known by both physicians and non-physicians, there is no need to go into further detail.

Since World War II American medicine has become preeminent. Students, doctors and patients come here from all over the world to study or receive care. However, it is interesting to note a peculiar paradox: In spite of spectacular advances in medical science and the public's high esteem for phy-

sicians, the medical profession is under constant criticism and attack by politicians, the communications media and others having for the most part little knowledge or experience in medicine.

All kinds of remedies are being proposed by these critics relative to improving medical care. Medicare, Medicaid, Kiddicare, Comprehensive Health Planning, Comprehensive National Health Insurance, Health Maintenance Organizations and Professional Standards Review Organizations (PSRO) are just a few of the many items that are already law or being considered as possible new legislation. Relative to PSRO, it is interesting to quote from a statement made on 9 May 1974 by Dr. C. Rollins Hanlon, Director of the American College of Surgeons, before the Subcommittee on Health of the U.S. Senate Finance Committee:

> ". . . We would like to mention . . . the pioneering effort of the College as the first organization to establish voluntarily a minimum standard for hospitals in order to assure the best care of the patient with a humanitarian aspect as the primary consideration. These efforts antedated but paralleled the intent of PSRO, beginning 55 years ago . . . From 1919 to 1952 the Board of Regents of the College, through dues of the Fellows, financed and administered the program of Hospital Standardization until technical and financial burdens of carrying this type of program led to its being handed over to the Joint Commission on Accreditation of Hospitals (JCAH) on December 6, 1952 . . . This joint commission included the American Medical Association, the American Hospital Association, the American College of Physicians, and the American College of Surgeons, which has for more than 30 years supported this voluntary effort entirely from dues of its Fellows without any personal gain except the improvement in standards of patient care . . . and a movement was instituted (by the ACS) to assure that all care of all patients was placed under a unified review called medical audit . . . the fledgling medical audit program was turned over to the Commission on Professional and Hospital Activities (CPHA) in 1959. This voluntary organization, in which the College still actively participates, has grown to be the world's largest and most sophisticated institution devoted to the collection and analysis of hospital medical data."

The present high state of medical care was brought about by physicians working in the environment of freedom afforded by American democracy. It is paradoxical therefore that politicians and others should be so active in enacting and proposing legislation to improve medical care. Also, when one considers their ranking in the survey at the beginning of this article, it seems strange. The television networks, magazines and newspapers regularly put out reports that are not only derogatory to medicine, but frequently vicious, and with little regard for the facts. These highly vocal critics ignore the accomplishments of American medicine and the fact that in recent years Americans have been receiving more and better medical care than ever before in the nation's history. What motivates these people is a matter of speculation, because one of the characteristics of man is his infinite variety of response to the same stimulus. However, it is hard to escape the feeling

that many of them are revolutionaries, who want to nationalize and bureaucratize American medicine. If this happens, it will be a national tragedy. Not only will medical care cost more and provide less satisfaction to both patient and physician, but it will be a giant step towards complete socialization of the country and the end of the American way of life.

EUGENE REYES PEREZ, M.D.

EUGENE REYES PEREZ, M.D., F.A.C.S., *Assistant Professor of Medical Education, Medical College of Virginia, and Executive Director, Virginia Regional Medical Program, Inc.*

Spanish Flux

LAST FALL I had the good fortune to visit the exotic and enchanting land of Spain with a group of American physicians. Our party was extended the courtesy of a visit to the Clinica Puerta de Hierro, the very modern hospital facility of the University of Madrid Medical School. We were received most cordially by the director and given a guided tour of the institution. An excellent clinical program on Hydatid Disease, its prevalence and varied clinical manifestations, was presented by English-speaking members of the medical staff. We were informed that this disease is exceedingly common in Spain and more than two hundred cases are admitted to this hospital annually.

Upon my return to Richmond, our distinguished editor, Dr. Harry J. Warthen, Jr., who also journeyed to Spain during the same period, graciously invited me to record my most memorable medical experience. Even though I attended the clinical session described above, visited medical facilities elsewhere, and was briefed on the methods of Portuguese and Spanish medical practice, my choice has to be the title of this editorial,—"Spanish Flux", my own synonym for turista occurring in a Spanish setting. Turista has been described by many charismatic synonyms such as "gippy tummy", "Aden gut", "Basra belly", "Hong Kong dog", "Montezuma's revenge", and "Aztec two-step" depending on the geographical location of its occurrence. These terms, of course, are descriptive of travelers' diarrhea which is responsible for the majority of diarrheal episodes occurring in persons traveling to foreign countries. The writer experienced the effects of this disturbance in all its devastating fury as did a number of his traveling companions.

This troublesome malady is world-wide but is more common in tropical and subtropical regions. The disease has been reported frequently in Mexico, North Africa, and the Middle East.

Symptoms are rarely experienced during the first few days after arrival but generally develop between the fourth and fourteenth. Clinical manifestations begin suddenly and are usually accompanied by nausea, vomiting, chilliness, mild abdominal distress, frequent explosive copious watery stools without blood or mucus. Sometimes there is low grade fever and abdominal tenderness. No leukocytes are observed on microscopic examination of the stool because there is no mucosal inflammation of the bowel.

The source is thought to be food or water with person to person transmission being considered very unlikely. Although not a serious malady, travelers' diarrhea may considerably curtail one's sightseeing program due to intestinal turmoil with its attendant disturbed peace of mind. Confinement to the hotel room may be necessary for a few days, but the traveler rarely becomes so dehydrated as to require hospitalization for parenteral fluid.

The cause has been the object of considerable investigation and speculation. Early theories proposed include climatic change, effects of travel on Circadian rhythm, psychologic stress, irritation of the bowel by sand, dust or coarse foods! Microscopic examination of the stools has not been enlightening. Viral investigation, while limited, has failed to establish a viral etiology. Studies undertaken to determine possible bacterial causes have explored the shigella-salmonella group but results tend to discount these organisms as significant and important factors. However, it is well known that these bacteria can cause diarrhea in individual travelers and sometimes outbreaks in groups of travelers.

A decade ago Kean made an extensive study of diarrhea in travelers to Mexico and concluded that the cause remains unknown. He suggested that shifts in the bacterial population of the intestinal tract, possibly involving enteropathogenic strains of E. coli, might be responsible.

Several years ago a group of British soldiers developed diarrhea soon after arriving in Aden. Cultures of their stools revealed an enteropathogenic serotype of E. Coli (0148:H28) which is not found in England. Similar organisms produced diarrhea in American soldiers stationed in South East Asia. The weight of evidence at this time would seem to indicate that these so-called "toxigenic E. Coli" and other strains which are foreign to one's intestinal mucosa may be responsible for most cases of travelers' diarrhea, thus supporting the suspicions of Kean reported ten years ago. Persons become infected apparently soon after arrival at their destination with enteropathogenic serotypes, to which they are not exposed in their own country. Consequently, diarrhea may ensue due to immune deficiency in the traveler in relation to these particular serotypes. Hence, any given group may experience a high attack rate.

Limitation of activity, remaining in close proximity to the commode, the ingestion of light low residue foods, increased intake of liquids to replace fluid lost in the stool, and antidiarrheal agents such as paregoric, lomotil, atropine and kaolin for symptomatic relief are the main facets of management. In general, a period of several days is required before the symptoms abate. Rarely, does diarrhea persist after the traveler returns home.

The effectiveness of chemoprophylactic and chemotherapeutic agents is unknown, and these drugs cannot be recommended for general use at this time. If there is a background of chronic inflammatory or ulcerative bowel disease or a history of severe reaction to any previous episode of diarrhea, then chemotherapy should be considered. Standard dietary prohibitions, such as tap water, raw vegetables and salads, ice, raw milk and other dairy products, may possibly lessen the opportunity of exposure to the inciting agent.

(*Continued on page* 1042)

Presidential Address

JOHN A. MARTIN, M.D.
Roanoke, Virginia

MR. SPEAKER, Distinguished Guests, Delegates, Ladies and Gentlemen,

1. Two years ago at the conclusion of our Annual Meeting, I realized that one of the responsibilities I would face was preparing and delivering this Annual Address. I wondered then what I would be saying to you and whether or not it would be worthy of the trust and responsibility that this high office requires. As time passed and my involvement intensified, so many things have happened that need comment that I hardly know where to begin. This past year has been a most eventful year, possibly one of the most eventful in our history. Perhaps, because of the stimulation of the issues, as I traveled throughout the State, meeting with your local and scientific societies, it became obvious over and over again that we have tremendous potential in our membership for leadership and guidance to keep our Society even more alive and well than it is today.

2. In addition to the locally involved physicians, we are blessed with a hard cadre of concerned hard-working people who accept the responsibilities of their appointments and work at carrying out the objectives of our State Society. We are similarly blessed with a superb headquarters staff who enthusiastically give of themselves freely, pleasantly and without regard to the time of day or the day of the week to see to the needs of our Society. Our Executive Vice President and his staff deserve our thanks.

3. As you well know, our Society functions primarily by its committees, and some of the committee work this past year has been outstanding and deserves recognition. It is unfair to single out any one committee as being first on the list. Several deserve mention and in no particular order, I would like to mention the work of the Commission on Continuing Education under the Chairmanship of Dr. Charles Davis. His Commission accepted a serious and important responsibility from the House of Delegates last fall, plunged into a difficult project with the full realization that many pressures were on them to bring a report to you on a very complex problem. All of this has been done through the combined efforts of the members of the Committee who spent long hours at many meetings and much time between meetings to get the job done. They deserve our special thanks. I trust that after you have considered their report, you will agree that they have been productive and that there now is a program, well planned and documented, ready to be launched, providing you accept it which I hope you will do. The committee to revise the Constitution and By-laws under the Chairmanship of our vice speaker, K. K. Wallace, deserves special attention. This was another complex project long needed and certainly it was not a very glamorous job, but it is basic indeed to the foundation and framework of our Society. Their report is in your hands, and I hope that you will approve the new document. Our Legislative Committee has performed very well and has been very active and made their influence well known among our Virginia Legislators. It is impossible for me to call attention to all the committees, finance, insurance, joint practice, pharmacy, child health, sports, and many others, but I do want to mention one group which is not really a committee, your elected Council. I doubt that many of you realize how much time and effort is required of a Council member. At times, we take these things for granted. Your Council met six times this past year and all of the four regular meet-

Presented before House of Delegates of The Medical Society of Virginia, Williamsburg, November 3, 1974.

ings lasted at least six hours. In addition to this involvement, your Council members have responsibilities in their districts which calls on them for other meetings and discussions.

4. With the help of Council, several new ideas and new maneuvers were undertaken this past year. For the first time, Council went on a two-day retreat: right here in Williamsburg. When this idea was first presented, there was some rather active individual skepticism voiced about the subject just as some of you are wondering what possible good could come from such a meeting. For the first time, members of Council had an opportunity to think about basic issues and basic problems of our Society and its interface with the public and government without being confronted with a long detailed agenda of business that had to be considered. Several wild ideas were chased around the meeting place just to make people think, and at the end of the meeting written comments by the Councilmen and others attending almost universally said that the occasion was very worthwhile and very productive. One of the direct results of that meeting was the Council Meeting held in Fredericksburg in October instead of our usual Richmond location. This was the first attempt to bring the Council and the business of the Society into localities of the State where an Annual Meeting of the Society probably will never occur. The Fredericksburg meeting was the first of these with a prominent civic leader taking part during the luncheon. Hopefully as years pass, Council will meet in all of the Congressional Districts and touch base, as it were, with medical leadership throughout the State in their home environment, bringing the State Society to the local environment.

5. This, our Annual Meeting is important to all of us and was a subject of thorough discussion at Council Retreat. Attendance and participation have been worrisome problems with no real solution seen in the immediate future. A very small percentage of members register during the Annual Meeting, and this number has not grown in proportion to the growth of the membership. I think we can do something about our Annual Meeting even though lead time is five or six years because meeting space in desirable locations is committed that far ahead. One change has been made. This is the last year we will meet the first days of the week. More members prefer to meet Thursday through Sunday, and our future meetings are scheduled this way. We should seek a much greater change with a new format for daily events, and we should increase participation by the state scientific societies in the scientific and social programs. If the specialty and Family Practice Societies made their annual meeting time coincide with ours, a much broader scientific program could be offered to all. Programs of mutual interest to several societies could be developed. And following the example of successful programs in other states, no business or scientific activities should be scheduled in the afternoons. To bring this about much planning and cooperation will be necessary, including a substantial commitment from our Staff who would have the responsibility to bring it all together after the idea is accepted by some or all of our sister societies.

6. Professional liability insurance concerns all of us with the escalating rates becoming very high in our State and greater in other states. For many years we have had an active committee, the Liaison Committee to the State Bar, where attorneys and consultants from our Society get together and determine under certain ground rules if there is a true case. Five cases were discussed last year. This activity has not been enough, and another committee has been formed. This committee will permit insurance companies to have all of their problems discussed in a free wheeling uninhibited forum where professional advice from all specialties is immediately available, where names are not mentioned and statements unrecorded. This new committee, called the Insurance Liaison Committee, has had three meetings and discussed 33 cases. Hopefully, as it has in some neighboring states, this activity will be helpful in slowing down the ever escalating premiums. We all realize, of course, that the basic problem of escalating malpractice rates is not being addressed by this committee, but at least the

company says it helps them, and that is something.

7. Our State Legislative activities were intensified last year with meetings with the Legislators organized by the Councilmen in each Congressional District. If you have looked at the number of medically related bills reported on by our Legislative Committee, one can easily see the importance of this activity which should continue this year and every year.

8. Much as I would like to avoid it, since it has been a sore subject, almost like Watergate, mention must be made of the cause for our special meeting of the House of Delegates and our activities under Public Law 92-609, better known as the PSRO. Earlier when committees were mentioned, I purposely did not mention the Peer Review Committee under the very able Chairmanship of Dr. Robert Keeley, because I knew recognition would come with this subject. We must remember that before our special meeting, this committee dedicated itself to a very soul-searching task and had to face an unpopular issue; and since the special meeting, it has been busy assuming a new role on the Board of our Peer Review Foundation, and it is another committee that deserves special mention for outstanding service. Concerning this subject, certainly I cannot remember any issue, and the older veterans I have questioned say the same, that divided our membership as much as this one. So many of our respected and venerable members took exactly opposite points of view on a bedrock position. One of the reasons for the intensity of this reaction was because we had prepared no middle ground. We either accepted it, or we didn't. In taking my position, I realized that I was going to be exactly counter and opposed to many former Presidents who, for many years, have had the trust and respect of this House and still have it, and hopefully will continue to have it for many more years to come. When we lost the battle to have one review organization for the entire State and had to shift gears into the concept of a Support Center, the only thing salvageable that I could see was the option that with the help of our Society, physicians in each of our five designated areas could make their own determination about their involvement or formation of a review organization. I felt then, and I still do, that some central direction was, and is, necessary to prevent an even more chaotic situation. Most of you know that the Virginia Professional Standards Review Foundation has been formed, has received Federal funds to create and operate a Support Center, and that all of the five areas have made some organizational or investigative moves toward creating a review organization. Of all of the opinions expressed about PSRO, I like to grasp and work with several which describe a possibility that something good may come out of it. Properly done, I believe, based on working models in this state and in other states, that it will be possible to identify and discard patterns of care that no longer are appropriate. The acceptance of some of these potential practice changes should be favorably influenced, because they will originate from our own peers in our own communities. As important as the PSRO issue was and is, the future of our Society and our respected vocation does not depend on this problem alone. There are many other forces and moves in Washington far more important than this. It really isn't too unreasonable for a third party payor of enormous sums of money to ask for an accounting of the appropriateness of the services paid for. Fortunately they are asking us, the physicians involved to make this judgement. I think we should face the realities that exist and work together to make the best of it. It would be a tremendous help in putting together a statewide review process if we could find and use funds to support our Foundation independent of the Federal funds granted to our Support Center.

9. Since the PSRO came to us by virtue of national legislation, some consideration of the problems of new laws and regulations needs attention. China and the Chinese have become a popular subject of late. One of their ancient philosophies is called the Yin-Yang. This proposes that all things come into existence from their interaction with one representing good, the other evil; or one light, the

other darkness; the beneficent against the maleficent. There is always the struggle between opposing principles. As far as our relationship with the Government is concerned (Federal and State), I can see this kind of philosophy and atmosphere forever with us. Currently, health policy in Washington is in the hands of various kinds of economists and business executive types. The number of physicians and good health administrators in major positions are few indeed. And few have critical decision and policy making authority. The prevailing feeling is that physicians are incompetent administrators and that the only way to correct the so-called health care crisis is a take-over by management experts. What we do not generally know and accept is the quality and capability of these people and others in the Congressional Committees and in the various departments, such as Health, Education & Welfare and the Office of Management and Budget, for example. These are the bureaucrats who create the issues, the programs, and the legislation that concerns us and they know nothing of medical practice or hospital operations; but they have done their homework and they have acquired surprising amounts of data and know exactly what they want to accomplish. Also, they seem to have a remarkable ability to recruit a variety of consultants from our own ranks who support their objectives. We are constantly on the defensive, it seems, having to put out fires, trying to influence legislation when it's about to emerge as a law. We need to know and understand more about this human force and this peculiar mechanism which has so much influence over us. We need to know how to cope with them and to accept the fact that we are going to have to cope with them from now on. It may surprise us to realize that even some individual Congressmen feel insecure and ineffective when they try to cope with these individuals who have control of the regulating language which often says different things than the law itself. Think what could have happened to us if some of the atrocious proposed laws were enacted that actually were reported out of the full committee and officially reached the Senate floor for action. Can you imagine the regulations that would have resulted from a law that would have forced medical schools to require that their students would agree in writing to practice as a member of the National Health Service Corporation so that practice locations could be determined; that a National Council on Postgraduate Physicians Training be created which would determine the need, the number and the location of all residency programs; that would completely take over all physician licensing, developing the standards and the examinations and would further require periodic relicensure by examination every six years for all physicians. These were in Senate Bill 3585 reported to the floor of the Senate by the Labor and Public Welfare Committee. Or consider from the same committee Senate Bill 2994—a health planning bill which would divide the county into health service areas and authorize public utility-type rate setting for institutions for services—including physician services presumably those known as hospital based. Fortunately, the full Senate changed these bills considerably.

10. And while we are on the subject of national legislation, I must describe for you a very viable bill now pending on the floor of the House of Representatives. This bill 16204 is very far reaching in its effect and if passed would result in a complete restructing of the entire health care complex. Like the Senate bill, it would establish Health System Agencies to provide planning for health service areas and to develop manpower and facilities to meet needs; it would establish State Health Planning and Development Agencies to administer the plans and development; it would create a National Council for Health Policy which would use nine specified priorities in formulating policy which include: the development of multi-institutional systems for coordination or consolidation of services including obstetrics, pediatrics, emergency, intensive care and radiation therapy, the development of group practices especially those which would integrate with institutional services; develop multi-institution arrangements for sharing services; develop services at various levels

of care on a geographic basis; adopt uniform accounting, reimbursement and management for institutions and others with all of the authority practically vested in the Secretary of H.E.W. Far reaching dangerous legislation to say the least.

11. Keeping Congressmen in office, friendly to medicine, is our first defense or our first offense in preventing these unrealistic, socialistic schemes which would unquestionably wreck the finest health care system in the world today. I was most surprised to hear one of our very well informed members say that he knew what VAMPAC was, but he questioned whether or not it did any good. It's pretty obvious that most of us do not understand the importance of political support and political action, or how well our political arm has functioned nationally and in Virginia. If we did understand and appreciate it, many, many more of us would be dues-paying members of VAMPAC rather than the 1300-1400 that do belong this year.

12. Although having friendly Congressmen is an absolute must for us, we also need to learn how to counter the activities of those other types who are behind the scenes. They are, of course, subject to Congressional influence from some individual Congressmen. Much more is needed, however. Usually, they listen only to the committee chairman or the department head. And these individuals usually are entrenched in their office by tenure or by appointment by the majority party. A strong well-organized articulate and persuasive organization is needed on the scene whose members can freely discuss and relate to these people in regulatory or influential government positions. Individuals in this organization must be dedicated and need to serve long enough to create free liaison, trust and respect with their opposites in government. They must know that their efforts are not always going to be successful and yet they must be secure in the knowledge that they are backed by a strong, resourceful and reasonable organization. You may not realize it, but there is this kind of organization at work for us: The Washington Office of the American Medical Association.

13. With our distinguished guests here from the AMA, it is fitting indeed that I say that the only organization that could possibly maintain an activity such as this is the American Medical Association. Beyond the clinical and educational programs we so often forget the AMA does many things for us. It certainly gives us a strong voice on important national issues. It represents us at the very front line on government matters and attempts to carry our views to the public. We must realize that as totally unacceptable legislation is generated, we cannot throw up our hands and retreat into the old posture that "doctor knows best and can do no wrong". Neither can we have a clamor of voices each claiming that they represent an important segment of medical practice that must be recognized and each promoting a different solution. Although we are few in numbers compared to other public groups who seek legislative influence, we do have influence but it could be much stronger if we acted uniformly. Unity is the word; we must stick together. But it does very little good to say these things in this room to all of you because you are organizational people. We do work together, we do belong to the AMA. There is something we can do, however, which would be a big step towards making us stronger, and I strongly recommend that we take it. I believe that the time has come to require that to become a Member, or to maintain Membership in The Medical Society of Virginia, one must be a member of the American Medical Association. Only about 2,200 of our almost 5,000 members belong to the AMA. This number is less than one-third of the physicians practicing in Virginia. When the AMA wins a battle or two in Washington, they don't just do it for the members of the AMA, they do it for every practicing physician in this country. It's so unfortunate that non-members do not receive the publications of the AMA, particularly the Newspaper and The Journal. Not receiving them, they have no way to really be informed about what the AMA does or how it really functions. They read highly biased articles in the public newspapers or in some of our free medical news-

papers that are clear distortions and not the facts; or they talk with some of their friends who are equally uninformed. Compulsory membership exists between our component societies and our State Society. Extending this requirement to the national society seems a logical step to me. The individual is still making a free choice to become involved in organized medicine. But the required involvement would not stop at the State Society level. The individual free choice is still there—we are saying become all involved, not partially. The component local society in Roanoke County has the same confrontations with the Federal Government as the component society in Fairbanks, Alaska. If we recognize and accept citizen status with civic responsibilities in our local towns and cities in the State of Virginia, why should we not expect to have the same obligation to the United States. Opposed to this concept is the fear that unified membership will result in a drop in State Society membership. Although no one can guarantee that this will not happen, the opposite was true in ten states, all of which enjoyed an increase in their state membership when they made AMA membership a requirement. This requirement would not be in violation of anti-trust legislation according to legal opinions recorded in the AMA's legal department and in the Medical Society of the State of New York. I recommend that we take this step here at this meeting.

14. Since this is my valedictory address, I must pay tribute to others who have made it possible for me to have this wonderful experience of being your President. True enough, it was a very busy year, with much demand on my time, most of it away from home. Many of you know that I visited almost all of our specialty societies at one of their meetings and many, but not enough, of our component societies. I also attended the annual state meeting of five of our neighboring states, and I must say that this, as well as my visits to our own societies, was a delightful dividend of the office. Without the complete understanding and cooperation of my wife, Joan, this awayness could have been an irritation to both of us. And without the full cooperation and understanding of the members of my radiological group, it would not have been possible to begin with.

15. This brings me to my last subject, which I alone feel qualified to discuss when compared to the last six or seven previous Presidents. Little realized until you consider it, there is a definite, subtle selection process occurring in the selection of your President and others who reach high office in the Society. It's not something that surfaces in the last few years of a member's activities, but its influence is felt very early in his involvement in our Society. With the large growth of group and clinic practice, the day is past when most of our members need only to answer to themselves concerning how much they work. Or if, during a year, they wish to give a third or a fourth of their working time to their Medical Society. Those partners left at home in the clinic or group practices may not wish to give up income or time off to allow one of their partners the option of this kind of involvement. These opinions are rarely spelled out and wouldn't be by most of us, but the effect is the same when individuals are required to use vacation time or are otherwise discouraged from participation in meetings which require their absence during working days. In this day and age of reasonable and customary fees, controls that are labeled as much and others that are not, and other factors, unless one enjoys non-professional income, there is not the opportunity or the capability for many of us to be financially able to leave our practices to this extent. I can say this freely, because this has not been a problem for me, but I know that it was and you know that it was for many of our previous Presidents particularly those in solo practice. I suffered no financial penalty, nor did I have make-up work to do when I returned home. There was no backlog of work to catch up or need to pay back for time out. Since I have not suffered any of these hardships, it is not then a personal issue for me and I make the recommendation because my concern is for future Society leadership and it is not prompted by a back-lash from a busy year.

Although we cannot fabricate time which is probably our most precious commodity, we can remove most of the potential financial penalty simply by requiring that the President accept a certain stated monthly remuneration from the Society which is more than a token payment and would contribute somewhere between the earnings generated by one-third to one-half of an average physicians time. To avoid embarrassment to Presidents-elect, and particularly Dr. Hill, I recommend that this change be made far enough in advance so that its effect would be on a then unknown President. I am confident we are penalizing ourselves in the choice of our leadership by turning off enthusiastic, capable young physicians who deliberately seek noninvolvement or little involvement in our affairs. I have heard many young physicians say that since service on Council is almost mandatory to be considered a candidate for the Presidency, they could never take the position for fear they would be displacing someone who could eventually represent their area as President. However far removed the goal might seem to be for one just beginning his work in the Society, we should remove this easily removable obstacle to encourage involvement and continued involvement of all of our talented young physicians.

16. I extend my heart felt thanks to the members of the committees, the Council and the headquarters staff for a job well done. I thank you more than I can express for the honor and opportunity you have given me in this office. It has been a great and wonderful experience. Based on the vigor of this organization—the wisdom of this House and the strong brotherhood of physicians that is interwoven throughout the nation and frequently surfaces despite our differences, I look to the future with serene contentment and conviction that our profession will properly prevail, as always.

2037 Crystal Spring Avenue, S.W.
Roanoke, Virginia 24014

SPANISH FLUX—Harris

(*Continued from page* 1035)

References

1. Kean, B. H.: The Diarrhea of Travelers to Mexico. *Ann. Int. Med.* 59:605, 1963.
2. Rowe, B., Taylor, J., Bettelheim, K. A.: An Investigation of Travelers' Diarrhea. *Lancet* 1:1, 1970.
3. DuPont, H. L., Hornick, R. B.: Clinical Approach to Infectious Diarrhea. *Medicine* 52:265, 1973.
4. Most, H.: Gastrointestinal Disturbances Related to Foreign Travel. Original Article. *Warren Teed G-I Tract*, October-December 1973.

William H. Harris, Jr., M.D.

914 Capitol Street
Richmond, Virginia 23219

Eastern State: America's Oldest Public Hospital

JAMES S. HOWARD, III, M.D.
Williamsburg, Virginia

Eastern State Hospital began admitting patients 200 years ago. This Institution has had an interesting history and, as America's oldest public hospital, it is a source of pride for Virginia's Medical Community.

UNTIL THE EVE OF THE AMERICAN REVOLUTION the lot of the mentally ill was a miserable one, indeed, in Virginia as it was throughout the Colonies. Turned out and left to wander about the countryside, kept in jails, or auctioned off by the State to the lowest bidder, little was done in their behalf until Governor Fauquier stood at the Capitol before the Virginia House of Burgesses in 1766 and again in 1767 and recommended that "every civilized country has a hospital for these people, where they are confined, maintained and attended by able physicians to endeavor to restore to them their lost reason." Under the administration of Lord Dunmore, on June 4, 1770, a public hospital was enacted into law to be located in the City of Williamsburg. The administration of the Hospital was placed in the hands of a board of directors. Among the first board members were such notable early figures as George Wythe, and Thomas Nelson, two signers of the Declaration of Independence, as well as Peyton Randolph, the President of the First Continental Congress. Four acres of land was purchased on the south side of town, and Robert Smith, the designer of Carpenter's Hall in Philadelphia, was named as architect. The original building was constructed over the next three years at a cost of approximately 2,800 pounds sterling. Thirty-two mentally ill people were evaluated and admitted to this Hospital between 1773 and 1779, and 25 pounds sterling money was allocated yearly for each needy patient. The patients were maintained by a keeper, a matron, and a small group of assistants with a local physician acting as the visiting consultant. James Galt was appointed the first keeper and his wife the first matron at an annual salary of 125 pounds sterling for both. This initiated the 89 years and three generations of service by the Galt Family to Eastern State Hospital. James Galt's home, once on the Hospital grounds, still stands in Williamsburg. Dr. John D. Sequeyra, a local physician and member of the Board of Directors, was the first consultant to the Hospital, seeing patients on admission and at weekly intervals until his death in 1795. Little is known of Dr. Sequeyra's medical practice. He is known to have studied medicine in Leyden under Boerhaave and is said to have preferred the simpler and more natural forms of treatment. He

Fig. 1. First Hospital Building of 1773, Robert Smith, Philadelphia, Architect.

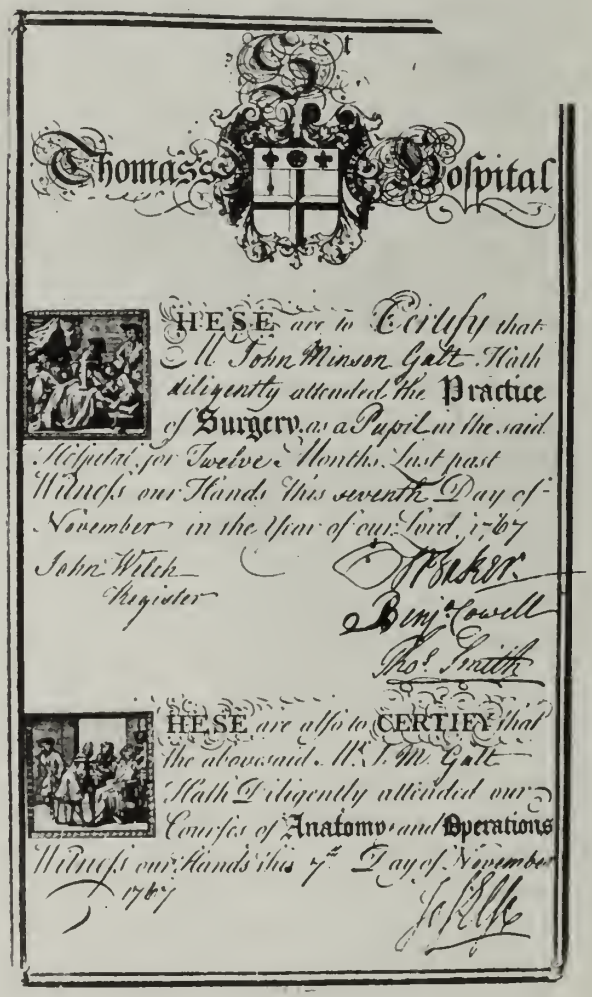
JAMES S. HOWARD, III, M.D., *Clinical Director, Eastern State Hospital.*

An opening address to the American Academy of Psychosomatic Medicine at their annual convention November 19, 1973.

practiced moderation in blood letting and emphasized mainly the role of digestion in illness. Although there is no pictorial representation of what actually went on in the early days of

Fig. 2. Dr. John D. Sequeyra, First Visiting Medical Consultant to the Public Hospital from (1773-1795), Courtesy of Henri Francis Dupont Winterthur Museum.

the hospital, it is known that the basement of the building was reserved for persons afflicted with the "raving phrensy". On the other hand, James Galt, the keeper, and his wife were known for their kindness, humanity, and good treatment of the patients, as well as the cleanliness and orderliness of the Hospital. At times patients boarded at the family's own table, even during the Revolution when rations and money were in short supply. Later, when the financial situation of the Hospital worsened in 1782 and the Hospital closed, Galt took several patients into his own home and cared for them anticipating by several years the more well publicized moral treatment of patients. In 1786 the Hospital reopened its doors, being incorporated by the State of Virginia and financed by the post revolutionary legislature. Between 1786 and 1790, 36 patients were admitted. About 1791 a second member of the Galt Family, Dr. John Minton Galt, a revolutionary war surgeon and brother to the keeper, began assisting Dr. Sequeyra as did Dr. Phillip Barraud, another Williamsburg physician. Dr. Galt received his medical certification from St. Thomas' Hospital in London. He also probably saw mental patients at Guy's Hospital nearby as part of his training. Although harsh treatment of patients was not practiced at the Hospital,



St Thomas's Hospital

HESE are to Certify that M. John Minson Galt Hath diligently attended the Practice of Surgery as a Pupil in the said Hospital for Twelve Months Last past Witness our Hands this seventh Day of November in the Year of our Lord 1767

John Welch
Register

Benj. Cowell
Thos. Smith

HESE are also to CERTIFY that the abovesaid Mr. J. M. Galt Hath Diligently attended our Courses of Anatomy and Operations Witness our Hands this 7th Day of November 1767

Fig. 3. St. Thomas' Hospital Medical Certificate of Dr. John Minton Galt, Visiting Consultant to the Hospital from 1795-1808, Courtesy of Mrs. V. Lee Kirby.

the fact that the early patients received little medical treatment at all for their mental conditions in Williamsburg may have been to their benefit as witnessed by some of the more

notorious forms of harsh treatment in use elsewhere. Physical restraint by chain and leg irons was practiced in Williamsburg, how-

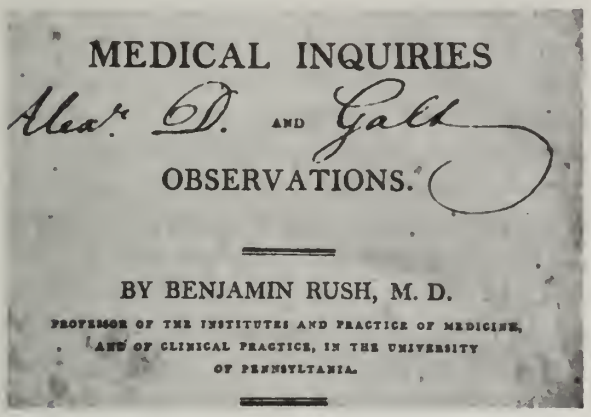

MEDICAL INQUIRIES
Alex. D. AND Galt
OBSERVATIONS.
BY BENJAMIN RUSH, M. D.
PROFESSOR OF THE INSTITUTES AND PRACTICE OF MEDICINE, AND OF CLINICAL PRACTICE, IN THE UNIVERSITY OF PENNSYLVANIA.

Fig. 4. Frontispiece From Medical Inquiries by Benjamen Rush, owned by Dr. Alexander D. Galt, Visiting Consultant from 1800-1841.

ever, as indicated by the records of local blacksmiths of the 1790's. It is noteworthy that about this time in Paris Pinel was braving the wrath of a revolutionary populace by unchaining the inmates of the bicetre hospital.

Dr. Galt cultivated many botanicals in his garden for use in his medical practice, among them being the white opium poppy. He and Barraud used cathartics and emetics, cold baths for sedation, warm baths for calming, and blood letting was used in moderation. In 1800 Dr. Galt's son, the young Dr. Alexander Galt, joined the Hospital's visiting medical staff. Both father and son, however, each had a large general practice in town in the back room of their apothecary shop as their main interest and served the Hospital only as visiting physicians until 1826 when daily visits became required. Dr. Alexander Galt also studied medicine in London at St. Thomas with the well-known surgeon, Sir Ashley Cooper, and had a knowledge of the work of Benjamin Rush. Yet although he was a well respected Williamsburg physician, there is little to indicate an innovative approach on his part to the mentally ill. Cathartics and emetics were freely used as well as the straight jacket. This was reflected by the report of the State survey teams at the Hospital in 1824 which emphasized the cleanliness of the Hospital and the recovery rate of 38% between 1798 and 1824, but failed to mention the more modern innovations of moral treatment being developed in England and in the North. These had to await for the most part the arrival of Dr. Alexander Galt's son, Dr. John Minton Galt, II, in 1841. Ten years later in 1834 the State review committee returned to the Hospital in Williamsburg and found that though the patients were well fed and clothed they had no organized activities, no work therapy or recreation to facilitate their mental improvement. The recovery rate at that time also had dropped to about 5%, the large number of chronic cases reportedly contributing to this low figure. Around this time or soon after farm work for Hospital patients began to be practiced in Williamsburg. Musical instru-

Fig. 5. Bust of John Minton Galt, II, Superintendent of Eastern Lunatic Asylum (1841-1861), Courtesy of Eastern State Hospital.

ments and recreational materials were purchased, and by 1839 physical restraint at the Hospital was being de-emphasized. In 1828

a second State Hospital, Western State, opened and by 1836 under the direction of Dr. Stribling took the lead over Williamsburg in

Fig. 6. Original Building Shown with a Third Story Added Shortly Before It was Destroyed by Fire in 1885, Courtesy of Colonial Williamsburg and Mrs. V. Lee Kirby.

moral treatment as well as increased recovery rates. This was pointed out by the State legislature in 1840, when at the same time they discouraged the use of the ducking stool and corporal punishment. In 1841 Dr. Alexander Galt, then 80 years old, was appointed the first superintendent, but due to illness did not serve until his death later that year. Dr. Alexander Galt's son, John Minton Galt, II, then became the Hospital's first full time physician and superintendent in 1841. At that time, also, the Hospital name was changed to Eastern Lunatic Asylum. After graduating from the Medical College of the University of Pennsylvania the young Dr. John Galt, sensitive and introverted, began his career at the Hospital, publishing articles in national journals, and was a staunch advocate of moral treatment. He included occupational therapy, recreation, and regular physical exercise for his patients. He viewed mental illness as due to psychological and social rather than physical causes, and in his own writing de-emphasized the physical approach of his predecessors, especially as his career progressed. His attempts to discover the hidden feelings and motives behind his patients' disturbed behavior were a definite innovation at the time. It must be said, however, that Galt did not go to the extremes of enthusiastic non-restraint which some English physicians recommended. For instance, it is known that he used the ducking stool several times and found it preferrable to both the cold water douche or Rush's compsing chair. By 1845, however, he, too, was advocating more complete non-restraint and was being praised for this by the Virginia State legislature. Even so, this staunch advocate of moral treatment at times was forced to manage some of his more violent patients with seclusion and restraint, and it is also noted that narcotics were used for tranquilization. At times he gave a tonic of quinine sulfate for debilitated patients. Blistering plasters were applied to the back of the neck in cases of subacute mental illness, and Dr. Galt recommended blood letting as a sedative in the manic patient as well as warm baths.

In implementing his program of moral treatment, Galt reorganized the asylum completely to encourage the extensive therapeutic contact of the staff members with the patients rather than primarily custodial care. Freedom of movement was encouraged even to the point of unaccompanied visits in town. The patients were welcome and frequently visited in Galt's own home, and Galt himself was noted to be personally warm and ever interested in the patients and their care. He initiated music therapy for the patients during the 1840's. A patient library was established. Teaching and educational programs were started. During this period also in keeping with the religious aspects of moral treatment a paid chaplain began regularly visiting the hospital.

Galt reported highly successful treatment results initially (55 percent recovery per year of those admitted in his first two years). Afterward this declined to about 28-30 percent, more in line with other hospitals. By the 1850's Eastern Lunatic Asylum was known to be filled mostly with the chronically insane. This was probably due to the taking for the most part by Western State Hospital of the young, the acutely ill, and the wealthy patients, and sending the rest to Williamsburg. During John Galt's 20 years in office the

asylum population tripled from 97 in 1841 to 300 in 1860. By 1850 Galt was shifting his therapeutic emphasis toward the needs of the chronically insane, by then comprising the majority of the patients. He advocated in the American Journal of Insanity a working farm for Eastern Asylum patterned on the farm of St. Anne at the Bicetri Hospital in Paris where patients could work and live in smaller cottages. He recommended in 1854 a therapeutic community as practiced in the town of Gheil, Belgium, without walls or concentration of patients and where patients might mingle freely in the community. Unfortunately, Dr. Galt's later ideas never came to fruition in his lifetime. He died at age 41, probably from stroke, less than two weeks after the Union forces captured Williamsburg in May of 1862.

The earlier Civil War years were hard times for the patients at the asylum. Battles at Ft. Magruder on the edge of town were said to have been observed from the turrets of the Old Gothic Building shown here. Food, medical supplies and personnel were all difficult to come by or non-existent. These were obtained from time to time from both sides of the conflict. In March of 1863 the Confederate Government appropriated $48,000 to the asylum in spite of the fact that it was being held in Union hands. Under the Union occupation, Dr. Peter Wager, assistant surgeon of the 5th Pennsylvania Cavalry, was appointed superintendent. On April 11, 1863, the town and asylum were captured by Confederate forces under General Wise. The Confederates then re-evacuated the town, paroling Dr. Wager and his staff to continue their work. From then until the close of the war conditions gradually improved. Supplies were brought in from the North, and a staff of 55 was eventually accumulated for the care of the patients. It is not surprising, however, that this care became again for the most part custodial. In October of 1865 Dr. Wager returned control to the civilian Virginia authorities.

During the reconstructive years, 1865-1868, several physician superintendents came and went and it must be said that these doctors were best remembered for their comings and goings in rapid succession on charges of corruption in office. Finally in 1868 and 1869 the U. S. Army again took charge of the Hospital, turning it back over to Dr. D. R. Brower, Superintendent from 1869 to 1876. Dr. Brower returned the Hospital operation back to the guidelines of moral treatment set down by Galt. However, it should also be added that this physician considered mental illness a physical disease like rheumatism or pneumonia, and in his report of 1870 he noted the first successful use of chloral hydrate as treatment for sleeplessness of insanity. In 1875 he pointed to an 80 percent recovery rate if the insane were hospitalized within the first three months of their illness as compared to only a 20 percent recovery if untreated for more than a year.

Following Dr. Brower's administration Dr. Harvey Black took charge in 1876. By that time because of the overcrowded condition at the asylum, he was recommending the Scotch system of foster homes for harmless incurables. He also felt that insanity occurred as a result of several causes, first among these was hereditary predisposition. He spoke of the "degeneration of children begot during the exhaustion of (the) ganglionic force of alcoholic intoxication" and stated that for those predisposed he recommended a life of temperance and peacefulness. Dr. Black implicated over-excitement and subsequent depression, ill health, masturbation, intemperance, religious excitement, and financial loss in the etiologies of mental illness. He advocated also the occasional use of physical restraint, such as the protection bed, or utica box, a crib-like affair with a slat top which could be lowered, forcing the patient to a supine position. He reported improving a young acutely demented lady with this device in combination with sherry wine, tonics and diet. After an uneventful administration by Dr. Wise, the superintendency was taken over by Dr. James Moncure for approximately 14 years. On June 7, 1885, shortly after he took office, a fire broke out, probably caused by a short

circuit in the recently installed electrical system of the Hospital, and burned down six major buildings including the original building.

Fig. 7. Eastern State Hospital as it Appears Today, A Modern Therapeutic Institution.

An expert on electricity, Professor Houston from Richmond was called in to investigate but could cast no further light on the situation. By 1893 Dr. Moncure's ideas were beginning to reflect a renewed interest in the physical approach to mental illness in psychiatry. He advocated postmortem examination of the mentally ill in an attempt to correlate the physical state of the patient with the mental condition during life. Further, he felt that only through such an approach could progress in the treatment of insanity be expected. On the other hand, in 1893 through criticism of the prejudicial term lunatic as one affected by demonical possession and the moon, he was successful in changing the Hospital's name to its present title—that of Eastern State Hospital. During Dr. Moncure's last years in office, the Hospital infirmary was opened for the specialized care of the physically ill. Also, around this time desiccated thyroid came into use in the treatment of mental illness with varying degrees of success, and it was also noted that suprarenal extract had been used in treating epilepsy. Dr. George W. Brown became superintendent in 1911, and under his administration all hypnotics were discontinued and substituted with physical exercise and hydrotherapy. Dr. Brown discontinued the use of medicinal whiskey at the Hospital and advocated birth control, among both alcoholics and luetics in application of Mendel's laws to the mentally ill. Under his direction arsphenamine treatment was instituted for syphilitics at the Hospital. In 1914 a pellagra study was conducted at Eastern State because of its association with mental illness. At that time bacteria, such as staphylococci, were isolated from the sores of pellagra patients, and it was concluded that pellagra might possibly be a communicable disease with the "pellagra bacillus" as the etiological agent. Dr. Brown continued superintendent for 33 years until 1943. In 1936 the Hospital began moving to its present site. Under his tenure in 1938 insulin and Metrazol shock therapy were introduced for dementia praecox, and estrogen hormones were given for involutional melancholia and depression. Nineteen hundred and forty-two saw the introduction of electrical shock therapy.

The last 30 years of Eastern State Hospital operation has been under the sequential direction of Doctors Barrett, Jones, Ashbury, and Schmidt. For several years in the early 1950's transorbital and prefrontal lobotomies were performed at the Hospital. In 1953 carbon dioxide therapy and IV barbiturate therapy was tried. Reserpine was introduced on an experimental basis in the Hospital in 1954, ushering in the age of major tranquilization. The use of chlorpromazine became widespread in 1955, and by the following year the various forms of shock treatment and neurosurgical intervention were being discontinued. The antidepressants were introduced in the 1960's, along with the vast permutations of the phenothiazines and the more recently developed different generic types such as the thioxanthenes and butyrophenone.

Today our Hospital exists as a completely modernized physical plant and therapeutic institution. Working as a member of the comprehensive mental health team with emphasis on deinstitutionalization and crisis intervention in the community, our in-patient population has now dwindled from an all time high of 2,500 in 1965 to its present level of 1850. Our

search for the causes of mental disturbance and its remedy is at present leading us into such areas of subspeciality as neuroendocrinology and cerebral metabolism. Finally, on the basis of a 200 year history of personal involvement and dedicated commitment to this extremely interesting and often enigmatic field, we would like to extend to you, our colleagues of the American Academy of Psychosomatic Medicine our warmest welcome as we begin our third century of progress at Eastern State: America's Oldest Public Hospital.

Bibliography

1. The Annual Reports of Eastern State Hospital (1865-1939).
2. Devils—Drugs and Doctors by Howard W. Haggard, M.D., 1929.
3. Disordered Minds—The First Century of Eastern State Hospital in Williamsburg, Virginia 1766-1866 by Norman Dain, The Colonial Williamsburg Foundation, Williamsburg, Virginia, 1971.
4. The Lame, the Halt, and the Blind by Howard W. Haggard, M.D., Harper and Brothers, 1932.
5. The Life and Work of Ashley Cooper by R. C. Brock and Thomas Kiernan, E. & S. Livingstone, LTD Edinburgh and London 1952.
6. A Pictorial History of Medicine by Otto L. Bettmann, Ph.D., Charles C. Thomas, 1956.
7. Pictorial History of Psychology and Psychiatry, Philosophical Library Inc. 1969.

Eastern State Hospital
Williamsburg, Virginia 23185

The Hazardous Hibachi

Glowing charcoal briquets are a pleasant and convenient method of grilling steaks, hamburgers, hot dogs and other goodies in the back yard of an evening.

Keep those glowing coals in your hibachi or grill where they belong—in the open air. In a closed space, they can kill you. The problem is a colorless, odorless, tasteless gas produced by smouldering charcoal—the highly lethal carbon monoxide.

Medical journals are sprinkled with reports from doctors called, too late, to treat victims of carbon monoxide poisoning from charcoal grills. The victims were individuals who brought the grill inside—into a camper, tightly closed tent, a room in the house, a room in a motel. Some thought the fire had burned out. Others, unaware of the danger, used the hibachi to warm the camper or lake cottage room on a cool evening. Some of them never woke up.

The title, "The Hazardous Hibachi," comes from a report published in the Journal of the American Medical Association, describing in detail five deaths from carbon monoxide poisoning from charcoal briquets—inside a Volkswagon bus, a trailer, a station wagon and a potato cellar. The journal article also cites five more deaths reported by other doctors. And a bulletin from the National Clearinghouse for Poison Control Centers reports on more than 30 deaths from the same cause.

Charcoal is perfectly safe when used as intended, in the open air or under a proper vent, such as a fireplace. The charcoal briquet sacks available in the grocery store carry warnings on the label against use indoors or in an enclosed space. The warnings read: "Toxic fumes may accumulate and cause death."

The Radiographic Innominate Lines of the Scapular Spine

WILLIAM P. HARBIN, B.A.
Nashville, Tennessee
CHRISTIAN V. CIMMINO, M.D.
Fredericksburg, Virginia

The frontal projection of the chest reveals a system of linear densities arising from the scapular spine. These lines, herein named the innominate lines, are discussed and explained anatomically. They are also demonstrated on lateral views of the chest where they may be interpreted incorrectly.

UNEXPLAINED RADIOGRAPHIC SHADOWS comprise challenges the roentgenologist cannot avoid.

A system of linear densities visualized on the frontal projection of the chest and of the shoulder is commonly but vaguely recognized as originating in the scapular spine. Standard radio-anatomic texts[1,2,3,4] deal with these shadows incompletely or inaccurately. We propose to describe their radiographic appearance more fully, to explain their anatomic anlage, and to demonstrate them on the lateral view of the chest, where they may cause errors in interpretation.

Radiographically, the completely developed system as seen frontally is comprised of two intersecting lines, resembling a variously distorted "X" or "chi" (fig. 1). At the axillary end of the scapular spine one line tends to terminate at the base of the spine near the glenoid; the other line follows the superficial

Fig. 1. A. The "X" is fully developed. B. Another patient with fully developed "X". C. Same patient, but with slightly different relationship between scapula and incident ray: one of the lines of the "X" is essentially lost; another line (double arrow), the serratus line, now appears (see text).

HARBIN, WILLIAM P., *Summer extern, Department of Radiology, Mary Washington Hospital; 4th year medical student, Vanderbilt University.*
From the Department of Radiology, Mary Washington Hospital, Fredericksburg, Virginia 22401, where reprint requests should be addressed to Dr. Christian V. Cimmino.

edge of the spine and ends at the transition into the acromion. At the vertebral end of the scapular spine, both lines diverge and merge with the vertebral cortex of the scapula. The crossing of the two lines occurs at about their mid-point. Part or all of the system may be lacking because of unsuitable projection or individual anatomy. The system is totally lost in the true lateral view.

Anatomically, the caudal and cephalic surfaces of the scapular spine comprise a complex system of curves, best appreciated by study of the anatomic specimen (fig. 2). That segment

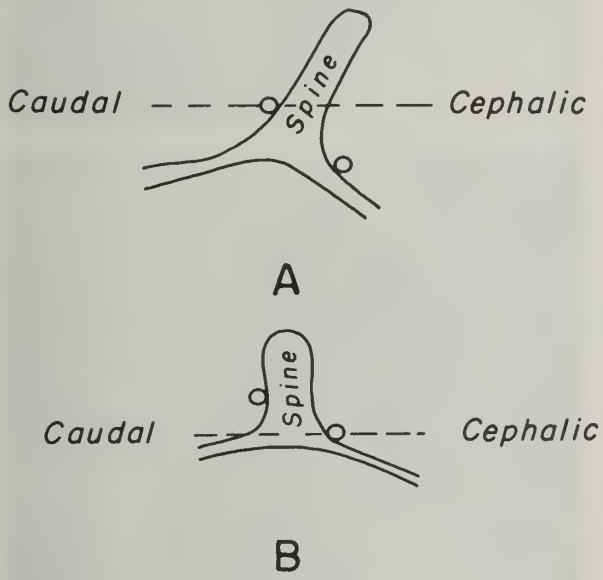


Fig. 2. Longitudinal sections through the scapula. The location of the two wires (little circles), visualized in the laminography of Figure 3, is demonstrated. The broken line represents the level of the two laminographic cuts in Figure 3. A. Section at the junction of axillary and middle thirds of scapular spine. B. Section at the junction of middle and vertebral thirds.

of the cortex of each of these two surfaces, caudal and cephalic, which is encountered in tangent to the incident ray produces each of the two lines. The surfaces are such that the crossing of the two lines occurs near their mid-point. It is evident that these two lines represent no fixed structure, and that their appearance radiographically will vary according to the relationship between position of scapula and angle of incident ray: hence, our name of *radiographic innominate lines*. Theoretically, the number of these innominate lines is in-

Fig. 3. A. Preliminary study of scapula with wires in place (see Figure 2 for location of wires). B. Cut through the level of the more superficial wire shows a large portion of the innominate system. C. Cut through the level of the deeper wire shows essentially none of the system.

Fig. 4. The innominate lines with an especially prominent serratus line. A portion of the serratus line is also seen in Figure 1c.

Fig. 5. Routine lateral views of the chest. A. Poorly positioned, somewhat oblique. The innominate system nearer the film (single arrow) has been degraded to a "Y"; the system away from the film is a distorted "X" (double arrow). B. The innominate system on just one side is seen. Easily mistaken for scar or localized pneumothorax (arrow). C. The innominate system of both sides is seen projected over the posterior thoracic wall (arrows). Could be mistaken for calcified soft-tissue mass in posterior thoracic wall.

finite, corresponding to the infinite combinations of position of the scapula and angle of incident ray. In certain of these combinations, inadequate cortex is presented in tangent to the incident ray, with failure of part (or all) of these two lines to be visualized. We correlated the innominate lines with the appropriate segments of cortex of cephalic and caudal surfaces of the scapular spine by radiography with wires attached to the specimen, and by laminography (fig. 3). It should be noted that the thickened ridge of the superficial edge of the scapular spine, which gives attachment to the deltoid and the trapezius,

does not contribute to the innominate lines.

Occasionally, a third line is encountered, parallel with the superior border of the scapula, and is easily confused with one of the innominate lines. This line is related to the attachment of the serratus anterior, and is expected only in the muscularly well-developed (fig. 4).

Familiarity with the innominate lines permits their identification on the lateral views of the adequately penetrated chest with surprising frequency (fig. 5). Their pattern, of course, differs from that of the frontal studies. The lines should not be visualized on the true lateral view of the scapula, but the scapula is not truly lateral in the lateral study of the chest. The differences in positioning the shoulders on the frontal and on the lateral study of the chest further degrade the purely right-angled relationship of the scapula on these two views. The innominate lines must not be confused on the lateral view with localized apical pneumothorax, scars, or other abnormality.

Summary

1. The radiographic appearance and the anatomic basis of the system of linear shadows arising in the scapular spine, the innominate lines, are described.
2. These lines should be recognized on the lateral view of the chest, lest they be taken for localized pneumothorax, scars, or some other abnormality.

References

1. Lopez-Antunez, L.: Atlas of Human Anatomy. Philadelphia, W. B. Saunders, 1971.
2. Meschan, I.: An Atlas of Normal Radiographic Anatomy. Philadelphia, W. B. Saunders, 2nd ed., 1959.
3. Spalteholz, W.: Hand-Atlas of Human Anatomy. Philadelphia, J. B. Lippincott, 7th ed.
4. Wolf-Heidegger, W.: Atlas of Systematic Human Anatomy. New York, Hafner, 1962.

Station 17, Vanderbilt Hospital
Nashville, Tennessee 37232

Anorexia Nervosa

Cooperation of physicians is requested in the referral of patients with anorexia nervosa for a study being conducted by the National Institute of Child Health and Human Development, Reproduction Research Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients will be entered into a double-blind treatment protocol with cyproheptadine with concomitant endocrine evaluation.

Upon completion of the study, patients will be returned to the care of their referring physicians who will receive a summary of the findings.

Physicians interested in having their patients considered for admission may write or telephone: Dr. D. Lynn Loriaux, National Institute of Child Health and Human Development, Clinical Center, Room 12N206, National Institutes of Health, Bethesda, Maryland 20014. Telephone: (301) 496-5800.

Cancer Trends....

Edited by—

WALTER LAWRENCE, JR., M.D.
Richmond, Virginia

J. SHELTON HORSLEY, III, M.D.
Charlottesville, Virginia

Bone Scanning in Clinical Oncology

CHARLES D. TEATES, M.D.
JAMES G. HUNTER, JR., M.D.

Bone metastases are quite common with most malignant disease, estimated to occur in 70% or greater of patients with cancer (Jaffe)[1]. A sensitive and specific test for bone involvement by malignancy is highly desirable. Unfortunately most serologic tests are not very sensitive or specific. Although the radiographic search for metastatic disease in bone is often successful, and although the radiographic changes are often rather specific for malignancy, metastatic involvement of osseous structures often goes undetected by routine radiography. Borak[2] demonstrated experimentally that ⅓ to ½ of the spongiosa of a vertebral body must be lost before this change becomes apparent radiographically. Edelstyn et al[3] showed that it required a destruction of 50 to 75% of the spongiosa of the vertebral body before this would be detected as a radiolucency. Cortical defects 5 mm or smaller were easily detected. Radiographic detection of destruction of long bones suffers the same lack of sensitivity unless the bony cortex is involved. Thirteen years ago Fleming et al[4] demonstrated that radioactive strontium localized preferentially in areas of diseased bone. For a number of years strontium-85 was the bone scanning agent of choice. Extensive experience with this agent has shown that bone scanning is considerably more sensitive than radiography in the detection of tumor involvement of bones.[5] All types of bone tumors, primary and secondary, are effectively demonstrated by bone scans. Further experience demonstrated that a positive bone scan indicates an abnormality of blood flow or bone formation and is not specific for malignancy. For example, healing fractures may be positive on the scan for over a year. Paget's disease, osteomyelitis, arthritis, soft tissue calcification and other conditions are associated with increased deposition of radioactive strontium. Fortunately, most of the conditions other than malignant disease that cause increased deposition of bone scanning agents can be detected by a radiographic examination of the involved part. The sensitivity of bone scans allows the detection of 50 to 100% more lesions than can be detected on a routine bone survey.

Although radioactive strontium-85 is a successful bone scanning agent, the relatively high radiation dosage to the patient's bone marrow restricts its usefulness. The Atomic Energy Commission limited its use to patients with known or suspected malignancy. The amount of the material that one could administer was limited so that the time for scanning was prolonged, and it was difficult to survey a large

From the Department of Radiology, University of Virginia, School of Medicine, Charlottesville.

Sponsored by the Professional Education Committee, Virginia Division of the American Cancer Society.

Fig. 1. Total body bone scan 3 hours after injection of 10 mCi of Tc-99m Polyphosphate. This 41-year-old female developed left hip pain following radiotherapy for carcinoma of the cervix. Radiographs were normal. The anterior view (A) shows a normal distribution except for increased uptake in the left femoral head and neck. The midline pelvic activity is from excreted agent in the bladder and vulva. The posterior view (B) shows normal renal, bladder and bone activity, except in the involved left hip. There was symptomatic relief after local radiation therapy.

area of the patient. In addition, radioactive strontium deposits relatively slowly in bone, is cleared from the soft tissues slowly, and is excreted to a considerable degree in the stool. As a result, the routine bone scan was obtained from two to five days after injection of the radioactive material. This long delay imposed a further limitation on the use of this agent.

In recent years, there has been a rather dramatic improvement in the radiopharmaceuticals available for bone scanning. Fluorine-18 has a short half life. The low radiation dose allows one to administer larger doses of radioactive Fluoride with improved scan quality. Unfortunately, this material has not been available in most laboratories. Although other agents were tried, most laboratories continued to use radioactive strontium until a number of compounds were introduced recently which could be labeled with technetium-99m.

Technetium-99m is available in most nuclear medicine laboratories in chelates with several phosphate compounds that localize in bone. The most commonly used agents at this time are technetium-99m polyphosphate (a long chain phosphate polymer), technetium-99m pyrophosphate (a short chain polymer), or one of several other phosphate compounds. These agents are not excreted in the bowels to a significant degree, but there is a considerable excretion by way of the urinary tract. Scanning is performed from 3 to 5 hours after the injection of the materials. The high nuclide doses that can be safely administered allow rapid scanning with very high quality scans. Much greater detail is available than was seen in previous bone scanning agents.[6]

At the same time that the radiopharmaceuticals have been improved, the equipment used for performing bone scans has also been considerably improved. It is now possible to obtain survey bone scans of the total skeleton in approximately one hour. These can be performed with the rectilinear scanner or one of the several types of gamma cameras. The capability for total body scanning now makes the bone scan a true survey for primary or secondary bone tumor.

Indications for Bone Scanning

Much of the work that has been done in the past with bone scans has been directed towards the clinical management of patients with previously treated malignancies who were thought to be developing metastatic disease. Bone scanning has thus been used primarily as a tool for directing palliative therapy. When used in this fashion, bone scanning has demonstrated a high percentage of bony involvement. For instance, Gnekow et al[5] demonstrated bony involvement of 48% of their patients who had proven malignant disease. In 17% of

these patients with bony involvement, the radiographic studies were within normal limits. False negative scans were recorded in less than 1% of the patients with bone involvement. In another series[7] bone scans with Fluorine-18 showed abnormal sites in over half of the patients. Less than half of these sites were detected by routine radiographic examinaitons. Bone scans were normal when x-rays showed metastatic disease on about 6% of the patients with bone lesions.

There is increasing attention to another group of patients, those who are about to receive initial therapy to their tumors. Despite improvements in surgical techniques and radiotherapy in the recent decades, there has been little or no improvement in cure statistics for certain types of tumor. This is particularly evident in carcinoma of the breast. Many individuals feel that the lack of improvement in cure rate indicates that the tumor has spread beyond the treatment field by the time the diagnosis has been made. In these situations, it would appear that less extensive surgical procedures could be performed with perhaps less associated morbidity. We would like to review some of the data regarding pre-operative evaluation of patients with breast and prostate carcinoma.

Pre-Operative Evaluation of Breast Cancer

Several groups have reported their studies of patients with breast carcinoma. Galasko[8] studied 117 patients, 100 of whom had breast carcinoma. The other 17 patients had benign breast diseases. Fifty of the patients with breast carcinoma had "early" lesions. All of these patients had clinical examinations, radiographic survey and bone scans performed with a gamma camera and Fluorine-18. In the control group of 17 patients, all the scans were negative. In 12 of the 50 patients (24%) with "early lesions," the bone scans were abnormal. Seven of these 12 lesions have been confirmed as being tumor within 12 months of follow-up. In the 50 patients with "advanced tumors", 84% had abnormal scans. Approximately half of these lesions were evident on x-ray at the time of diagnosis. Sixty-two percent of the lesions detected by scan were later confirmed on x-ray. In the 31 patients with advanced tumors who had multiple lesions demonstrated on scans, all but one have subsequently been confirmed radiographically or at autopsy to have tumor at the site indicated on the scan. Galasko noted that some of the lesions were confirmed on x-ray as late as 18 months after the scan became abnormal.

Hoffman and Marty[9] studied 164 patients with breast carcinoma. Sixty of these had bone scans with strontium-87m within the first three months after surgery. In the 49 patients with stage I or II breast carcinoma, 19 (40%) had scans consistent with metastatic disease and only six of these had abnormal x-rays. Sixteen of these 19 abnormal scans had been proven correct by x-ray, biopsy or autopsy. In most instances, the x-rays became abnormal within one to three months but in five cases the x-rays became abnormal after longer than six months.

Robins et al[10] reviewed their material on 321 patients with operable breast carcinoma. They found 61 patients who subsequently developed bone metastasis in a 10-year follow-up period. Nearly half of the lesions became evident within two years. The incidence of bone involvement in patients who were shown to have no nodal involvement of tumor was only 9.5% (16 of 168 patients). Thirty percent of the patients with positive nodes did develop bone lesions. The 10 year cure rate in those patients without bone metastasis was 63% as contrasted with the 10 year cure rate of only 6.5% in those patients who developed bone metastasis. It was their impression that routine pre-operative bone scans or surveys were not indicated unless the primary lesion was advanced or the patient had symptoms suggesting bone metastasis.

Uchiyama et al[11] studied 33 patients within three months after surgery. Seven of the 33 patients had abnormal scans and four have been shown to have tumor involvement. One was shown to have benign disease on x-ray

and two of the patients still have no other evidence of bone metastasis. Thus in their series, approximately 10% of the patients had proven bone metastases at the time of surgery.

In all of these series, one can criticize the data because there may well have been some selection process involved in referring the patients for bone scans. Nevertheless, a number of studies have indicated that 10 to 40% of patients with breast carcinoma have bone involvement at the time of initial diagnosis.

Pre-Operative Evaluation of Prostate Cancer

Despite the fact that carcinoma of the prostate frequently gives osteoblastic lesions that are readily evident on x-ray, bone scans have demonstrated a significantly higher proportion of patients with bony involvement than was previously realized. Roy et al[12] studied 30 patients with Fluorine-18 and a gamma camera. In 11 cases there was radiographic evidence of bone metastasis and the scan was abnormal in each instance. Fourteen additional patients had abnormal scans, and four of these were due to benign disease that was seen on x-ray. Thus the scan was able to detect 10 additional cases that were presumed to be metastatic carcinoma that were not detected on x-ray. Several of the cases were autopsied and the authors make a point about the necessity of confirming the diagnosis of sites that appear abnormal on scan. It was their opinion that scans are very useful in staging prostate carcinoma and they use scanning as a clinical tool in planning.

Robinson and Constable[13] studied a larger group of patients with prostatic carcinoma. In 42 untreated patients, there were 18 abnormal scans (43%). Five of these 18 had normal x-rays. It was their feeling also that abnormal scans should be confirmed by biopsy or x-rays if this is used to influence therapy planning.

Conclusions

Both scans have been used with great effect in searching for bone metastasis in patients with known malignant disease. In the past, this has been used mostly in patients with other clinical evidence of recurrence, and the bone scan has been very helpful in planning additional therapy. When there are multiple lesions present, and when there is no radiographic evidence of benign bone disease, one can assume with a high degree of assurance that the abnormal scan indicates malignancy.

One must be somewhat more cautious in using the bone scan for therapy planning in patients who have not received their initial therapy. If multiple lesions are present and the x-rays show no evidence of benign disease, the probability is quite high that this does represent metastatic involvement of bone. However, we feel that bone biopsy or some other method of confirmation is to be recommended in patients with a single lesion shown on scan with normal x-rays. We recommend careful localization of the site involved and an open biopsy or a needle biopsy before denying the patient the traditional curative procedure for that type of tumor.

Information is now available to show that a significant portion of patients have osseous metastases demonstrable by bone scan at the time of initial diagnosis. The use of this technique with histologic verification will reduce the number of radical procedures in patients where the tumor is not curable.

References

1. Jaffe, H. L.: Tumors and Tumerous Conditions of the Bones and Joints. Lea and Febiger, Philadelphia, 1958, page 600.
2. Borak, J.: Relationship Between the Clinical and Roentgenological Findings in Bone Metastases. Surg. Gynec. Obstet. 75: 599-604, 1942.
3. Edelstyn, G. A., Gillespie, P. J. and Grebbell, F. S.: The Radiological Demonstration of Osseous Metastasis: Experimental Observations. Clin. Radiol. 18: 158-162, 1967.
4. Fleming, W. H., McIlraith, J. D. and King, E. R.: Photoscanning of Bone Lesions Utilizing Strontium-85. Radiology 77: 635-636, 1961.
5. Gnekow, W. C., DeNardo, G. L., Poole, G.

J. and Kriss, J. P.: Review of a Five Year Experience with the Radiostontium Bone Scintiscan. Calif. Med. 117: 1-7, 1972.

6. Charkes, N. D., Valentine, G. and Cravitz, B.: Interpretation of the Normal 99mTc Polyphosphate Rectilinear Bone Scan. Radiology 107: 563-570, 1973.
7. Sharma, S. M. and Quinn, J. L.: Sensitivity of ^{18}F Bone Scans in the Search for Metastases. Surg. Gynec. Obstet. 135: 536-540, 1972.
8. Galasko, C. S. B.: The Detection of Skeletal Metastases from Mammary Cancer by Gamma Camera Scintigraphy. Brit. J. Surg. 56: 757-764, 1969.
9. Hoffman, H. C. and Marty, R.: Bone Scanning: Its Value in the Preoperative Evaluation of Patients with Suspicious Breast Masses. Am. J. Surg. 124: 194-198, 1972.
10. Robbins, G. F., Knapper, W. H., Barrie, J., Kripalani, I. and Lawrence, J.: Metastatic Bone Disease Developing in Patients with Potentially Curable Breast Cancer. Cancer 29: 1702-1704, 1972.
11. Uchiyama, G., Kakehi, H., Arimizer, N., Yui, N. and Saegusa, T.: Radioisotope-Survey of Metastases of Breast Carcinoma to Bone Using Sr-87m and Whole Body Scanner. Aust. Radiol. 16: 388-392, 1972.
12. Roy, R. R., Nathan, B. E., Beales, J. S. M. and Chisholm, G. D.: 18 Fluorine Total Body Scans in Patients with Carcinoma of the Prostate. Brit. J. Urol. 43: 58-64, 1971.
13. Robinson, M. R. G. and Constable, A. R.: Strontium-87m and the Gamma Camera in the Study of Bone Mestastases from Carcinoma of the Prostate. Brit. J. Urol. 45: 173-178, 1973.

Comment

Bone scanning is a more recent diagnostic tool available to help the physician more accurately determine the extent of a patient's cancer. As has been emphasized by the authors, this is not only applicable to the patient who has received primary treatment and is suspected of having metastatic disease, but also as part of the work-up to detect unsuspected metastases at the time of initial diagnosis. Radiographic and/or histologic confirmation of these findings are mandatory to the planning of more appropriate therapy.

The Editors

Clinical Center Study of Patients with Interstitial Lung Disease

The cooperation of physicians is requested in the referral of patients with interstitial lung disease for studies now in progress at the Clinical Center, National Institutes of Health in Bethesda, Maryland. These studies, being conducted by the National Heart and Lung Institute's Lung Branch, include the pathogenesis, natural history and therapy of pulmonary interstitial disease.

Patients needed are those with (1) known diagnoses or (2) roentgenographic evidence of interstitial disease and/or evidence of restrictive disease by pulmonary function testing. Hospitalization at the Clinical Center will be for one week.

Physicians interested in having their patients considered for admission may write or telephone: Ronald Crystal, M.D., National Heart and Lung Institute, Clinical Center, Room 6D-06, National Institutes of Health, Bethesda, Maryland 20014, Telephone: 301-496-1740, *or* Jack Fulmer, M.D., National Heart and Lung Institute, Clinical Center, Room 6D-06, National Institutes of Health, Bethesda, Maryland 20014, Telephone: 301-496-1740.

Surgical Grand Rounds . . . .

Edited by Gerald T. Golden, M.D.

Legal, Moral and Ethical Dilemmas in the Newborn Nursery

ANTHONY SHAW, M.D.
MARSHALL SHAPO, LL.B.

Dr. Anthony Shaw: My recent article in the *New England Journal of Medicine*,[1] entitled "Dilemmas of Informed Consent in Children", reflected my concern about the problems we have encountered in this area in recent years. With increasing frequency, we see infants with multiple congenital anomalies, particularly surgically correctable gastrointestinal anomalies, in association with severe mental retardation. Often, it is decided not to operate on these babies. For example, a baby with mongolism and duodenal atresia was recently born to parents, both professional people, who did not want their baby to be operated on. However, the local child welfare agency got a court order declaring the parents negligent. The baby was taken away and remanded to a local hospital where pediatric surgeons corrected the duodenal atresia.

This morning we shall talk about the legal problems confronted by physicians in such a situation. Our presentation will be that of an infant typifying this dilemma. We are fortunate today to have Dr. Marshall Shapo from the Law School to discuss some of the legal implications of these problems. First, Dr. Strauch will present a patient who recently posed some of these problems to our pediatric and pediatric surgical staff.

Dr. Robert Strauch: The patient was a full term, 7 lb. 12 oz. infant, born to a 30-year-old mother in September 1973 at another hospital. The pregnancy and delivery were complicated by polyhydramnios. At birth, the child had a head circumference of 16½ inches, with craniosynostosis, involving primarily the sagittal sutures, and possibly hydrocephalus. Neurological examination at birth revealed an unresponsive child with a low, monotonous cry and poor muscle tone. She was subsequently transferred to this institution.

Twelve hours after birth, the child vomited bile-stained fluid, and abdominal roentgenograms revealed duodenal obstruction. A nasogastric tube was passed and the vomiting controlled. On the second day of life, a ventriculogram showed moderately enlarged lateral ventricles, compatible with a communicating hydrocephalus. The neurosurgical consultant felt that immediate shunt was not indicated, but that correction of the craniosynostosis should be performed at a later time. No definite neurological prognosis could be given.

All of these problems were discussed at length with the family on the second day of life, and they requested time to consider what course of action they wished to follow. Three days later, the patient's father stated that he did not want surgical intervention. He felt the child would be retarded and did not wish her to suffer. It was then agreed that intravenous support would be withdrawn and the child would be tried on oral feedings. After several days, it became evident that the child was tolerating the feedings to a limited extent and could continue to survive in this state for a long period of time. The family finally agreed to correction of the duodenal stenosis, and a duodeno-jejunostomy was performed on the 12th day of life. Postoperatively, the anasto-

From the Department of Surgery, University of Virginia School of Medicine, Charlottesville.

mosis was slow to function, and the child was maintained on parenteral alimentation until commencement of satisfactory oral feedings on the 21st postoperative day. A repeat ventriculogram at one month of age showed a mildly dilated right ventricle, a markedly dilated basal cistern and coarse cortical pattern which showed little change from the previous ventriculogram. She is now in the newborn special care area, awaiting correction of her craniosynostosis.

Dr. John Jane: This child presents a very difficult problem to us. If a child has uncomplicated hydrocephalus, in other words, hydrocephalus without any other major abnormality, the usual policy is to perform a shunt, for two reasons. First, we cannot predict the final neurological outcome in that situation. Secondly, of the children we follow who have not been shunted, 50% survive approximately eight years; the head often attains an enormous size, and the child becomes unmanageable. In essence, we feel that every child with hydrocephalus should have a shunt. We did not feel initially that this child should be shunted, because we thought it would create total synostosis. We preferred to time the shunt with the correction of the synostosis, if possible.

Dr. Anthony Shaw: The child's father insisted on an absolutely accurate prognosis and refused to accept the idea of having a baby that might possibly be abnormal. When he found out that the baby had intestinal obstruction and would die without surgery, he declined surgery for the infant. We urged him to reconsider correction of the duodenal stenosis, since the baby's ultimate neurologic prognosis was unknown.* However, the father was firm, and most of us felt inclined to go along with him. It was subsequently found, however, that the baby was capable of survival with feeding, and the decision was changed. Without going into a lot of the ethical and moral concerns here, I would like to raise some of the legal problems that concern us and turn this over to Dr. Shapo with just a few questions:

What constitutes "informed consent" or "informed refusal of consent" in these cases?

Does a father have a right to refuse surgery in the State of Virginia when his child would die as a result of not having it?

Should a court order have been obtained by the staff in this situation to allow surgery?

Should legal counsel be obtained by physicians who are confronted with this kind of a problem?

Once a decision has been made not to operate, should the baby be put on nasogastric suction or just left alone?

Should the baby be provided with intravenous feedings?

What is active euthanasia, what is passive euthanasia, and so on?

If an outside agency obtains a court order to operate on the baby, can the surgeon be told by a judge that he has to operate?

Finally, if the decision is made not to operate on the baby at the parents' request, what kind of safeguard should physicians have to prevent them from being sued after the baby's death by the parents who will say, "Well, we didn't know that the baby would die"?

Dr. Marshall Shapo: I would like to make some preliminary remarks having to do with how lawyers think. First, lawyers, at least to begin with, are technicians. And, as is implicit in what Dr. Shaw has said, everyone has to make his own moral judgments. I won't attempt to make those for you or even to suggest those answers, and if I come up to the line of morality, I will try to indicate that I know I am coming to that line. I would add, second, that surely lawyers ought to make personal moral judgments—I make many myself—but I won't pretend mine are superior to yours. It seems to me that in cases like this we are all engaged in a quest, and essentially what I am doing for you is arguing with myself out

*The combination of craniosynostosis and hydrocephalus is so rare that only one or two reports of small series of patients were available for analysis.

loud. The reason these are interesting cases is that really no one knows the answers. Lawyers are accustomed to lining up and distinguishing cases. One of the most established modes of legal reasoning is reasoning by analogy. That's the kind of argument I will be carrying on with myself. I have to emphasize to you that this is such a new area that the only way we really can reason is by analogy.

Approaching problems of this kind in terms of litigation, we have to look at the results of cases in areas fairly close to this and try to decide where the courts might come out in the case that Dr. Shaw put. I am going to assume, for the pedagogical purposes of Grand Rounds, that the question comes up approximately at the time that you are trying to decide whether to operate on the obstruction. I am going to assume further—not knowing how much of this I believe because I am not sure what I do believe about that question—that there is a possibility that there might be civil liability in the circumstances described for the failure to operate followed by death of the child. If you want me to assess that possibility of civil liability, I think as a practical matter I don't rate it too high. But it seems to me that in this case, perhaps more strongly that in some other cases that might be put, the possibility is there and I would like to explain why I think there is that possibility. I will try to articulate it in the form of an arguable legal proposition drawn from the facts.

Among those facts, I gather, are that you have an intestinal obstruction and a hypothesized problem of brain atrophy, but the hypothesis involves three levels of uncertainty. I should interpolate that I am now working from what Dr. Shaw informally told me a couple of days ago and what I understand more or less to have been the case three weeks ago, and not on the basis of the new evidence. The uncertainties in the hypothesis, I understand, include the following:

1. There was the question of whether the child was hydrocephalic;
2. If it was hydrocephalic, what type—was it progressive? and
3. There was a general uncertainty concerning the chances that the child had for a normal intelligence.

Continuing my assumed facts, the only published literature on the subject was one article, and there was no clinical experience in this hospital. Given these assumptions, I am suggesting as a theoretical proposition that when there is an emergency situation, such as the partial obstruction, combined with a non-emergent problem that may signal significantly subnormal intelligence, but concerning which there is not one but several levels of uncertainty, there exists at least the possibility of civil liability. I'll emphasize again that I don't know how strong that possibility is—I have a curbstone opinion that it is not a probability—but it's there and I have to say that the only way you can solve that problem legally is to look at lines of cases from other areas. I am not a specialist in this subject and I haven't researched this question in any detail. Also, it's always difficult to say there are no cases on the subject, but I don't know that there are any cases on this exact problem.

I do know that there are lines of cases on at least four other subjects from which a judge confronted with this problem might draw analogies. One such line of cases is the Jehovah's Witnesses decisions. In those Witness cases involving children I think it is fair to say that the matter has been more or less settled; you can get a court order, for example, to give a transfusion. The highest law that I know on that subject is a case decided by a three-judge federal court in the State of Washington, saying that the Washington statutes on the subject, as applied to a transfusion for Jehovah's Witness children, were constitutional.[2] The reason that's an important case is that the Supreme Court affirmed that decision in a summary opinion that really didn't say anything about its reasons.[3] But I think that in the case of children it can be said with some certainty that it is well established that a court order can be had. There is by further analogy a very interesting case in the Federal Court of Appeals for the District of Columbia—some of

you may know it—the Georgetown Hospital case, which involved the Witness mother of a seven-month-old child. The mother needed a transfusion, and the transfusion was ordered despite the statements of both her and her husband, also a Witness, that they did not wish that procedure. The order was granted by a single judge of the Court of Appeals for the District of Columbia, Judge Skelly Wright, who later wrote an opinion justifying his decision. In that opinion Judge Wright used a number of analogies, for example the doctrine of what is called *parens patriae,* the notion that ultimately the state has a kind of parental obligation for its citizens and particularly its young citizens, in this case the child of the patient. Moreover, he noted that some relevant statutes prohibited and, indeed, made a crime of suicide, and finally at the end he simply said, "Life and death hung in the balance and I elected to act on the side of life." [4] There are other cases that seem to partake of this line of reasoning.[5]

Another line of possible analogies begins with the well-established principle that no person has a duty to aid another person, but really resides in the exceptions to that principle, exceptions that typically are based in the formulation that sometimes one has the duty to aid another if he is in a particular relationship with that person, as in the case of employer and employee. Sometimes, which brings the case a little closer to home, you have to aid someone if you've already taken him into your care and particularly if you have taken action that has blocked him from getting alternative care.[6]

There are two other areas from which we might draw answers to this problem by analogy. One rather well-established principle is that infants who are born alive may recover from injuries inflicted while they are fetuses.[7] Courts are now extending this role back to the "pre-viability" area.[8] Searching further for analogies in this kind of situation, on the other side are the Supreme Court's decisions of just the last term regarding abortion.[9] I would simply conclude this rather theoretical part of my presentation by suggesting that we are engaged in this quest because no one knows for sure what the answers to these problems are. However, I would like to address myself in extremely staccato fashion to the questions posed by Dr. Shaw and then we will have some questions.

First, with respect to the presentation to the family, it seems to me that it should be as full as the parents' intelligence can absorb. One idea that I think Dr. Shaw has mentioned to me, that of sending the parents into the library, giving them citations to read and letting them try to form their own conclusion, seems to me not only ethically proper but legally discreet.

The question of the father's rights to refuse surgery and the staff's obligations to get a court order are more difficult to resolve. I think you are there in a grey area, made grey because of both the legal and medical uncertainties. If you will forgive me an academic's attempt at model building for a moment, I shall ask whether the theoretical model that you are going to use is one that assumes that in some way everybody has or ought to have a lawyer—that every time a child is born, that child should have a lawyer appointed for him who is supposed to look after his interests. If we began with that model, I suppose that we would have a much different kind of outcome in practice. And, as to the father's right to refuse surgery, I'm not clear, really, what the law is on the subject now. As to the question of whether the staff should get a court order, I'd suggest that if you brought that case to me at the time hypothesized, namely before the surgery on the obstruction, that I would have to tell you that, if you had accepted care of the child in a fact situation including what I have referred to as three levels of uncertainty about long-term prognosis, and the child died without surgery, there is a possibility that these parents might conceivably turn around and sue you for malpractice. I imagine that if you had gotten appropriate consent, particularly after three or four days of parental agonizing, so that the choice was

as free as it could be in the circumstances, that possibility would be pretty well mitigated; but I think there does remain the highly theoretical possibility that guardians for the child or an administrator appointed for the child might be able to bring some kind of action, or that conceivably the Commonwealth's Attorney could bring some kind of a criminal action. I am not a criminal law specialist and I certainly don't know the answer to that. I can say that there is a big distinction between making people do things and suing them after they failed to do something.

The answer to your last question is that a surgeon can't be ordered to operate. That, I would suppose, is a violation of the 13th Amendment, which prohibits slavery. But just because you can't make the surgeon operate doesn't mean that, after the fact, his failure to operate can't be called grounds for civil liability. I would say that you might have civil liability. I think as a practical matter that that is highly uncertain; I would rate the chances less than half and probably significantly less than half, but I think it is a case that theoretically might succeed. To me the most important factual point—and I don't know what all of this means when you see it through the filter of a doctor's glasses—is that there is so much uncertainty in this particular situation. I found especially telling the point that was made here from the floor: that in the circumstances existing before the obstruction was removed, as I understand it, even if there was hydrocephalus, that much was perfectly compatible with a normal I.Q. If I were bringing a lawsuit in some way on behalf of the child—I am speaking very bluntly and informally now—that is the sort of testimony that I would like to get before a jury.

Dr. Shaw: We may be moving in the direction of every baby's having a lawyer, thanks to today's child advocacy programs, as well as the fact that most state child abuse laws now provide a guardian *ad litem* for children who are before the court. In New York State, in response to the liberalized abortion laws, an attempt was even made to appoint a Fordham law professor guardian for all unborn babies in the state.

Dr. Shapo: I might just add there that it is not indicative that the law is in confusion, but simply that the law has to respond to a lot of complicated factors, that at the same time we are witnessing developments which expand the rights of the newborn who are injured while in the womb and are born alive with deformities that are attributable to those injuries, we are simultaneously seeing another line of cases now in which the Supreme Court upholds the right to abort. Arguably, those are functionally contradictory lines of cases and it is particularly interesting to me as an educator to see how many students who tend to support recovery for the child injured before viability tend also to favor liberalized abortion. But there is a possible resolution to that problem and that is that a lawyer always has to ask, when he talks about a legal rule: For what purpose is the rule designed?

Dr. Milton Edgerton: In past years, as we all know, physicians have often assumed responsibility for these decisions, particularly in the case of a newborn child with tremendous handicaps of the head; sometimes, without consulting the family or going into this detailed agonizing, decision-making process, they have acted quietly on their own. I would submit that it seems terribly difficult for the parents to decide whether the child lives or dies; this is a tremendous burden. I wonder if you would comment on some of the consequences of the physician acting on his own initiative and taking the whole responsibility.

Dr. Shapo: I assume that the question is directed only to legal consequences, because I imagine that as persons we would all have our own subjective individual reactions to that. I am fully cognizant of the compassionate point that you are making and sensitive to it, and I would like to re-emphasize that in the end, everyone has to make his own moral judgments.

There is first a question laden with ethical issues, of how likely people are to find out about it and to understand it. And the second

question is how the parents are likely to react if they do find out about it. I assume a very large number of parents would, if that information came to them, say that it was for the best. I have to refer here to the theoretical point that in terms of macro-legal theory, all decisions people make in one way or another are subject to governance by the legal system broadly viewed. Often, however, the legal system's response is: we don't want to handle that problem. Indeed, I think this is a point that Mr. Cox made at the beginning of his famous press conference two weeks ago preceding the so-called Saturday Evening Massacre—Ed., which is that he had spent a lot of his life trying to find how to take burdens off the legal system. The point that you're making, I think, is that up until four or five years ago, doctors have taken that burden off the legal system, and that unquestionably that's a result that raises a lot of problems. Here we come back to the ethical problems that surround the question of what people know; and to be normative, I am very troubled by that answer because it seems—again in the present argot—to promote cover-ups.

Dr. Shaw: Of course, before the abortion law was liberalized, physicians who took the burden off the legal system often went to jail. After this came into the public forum and the public had something to say about it, the laws were liberalized. I think we are in the same situation now with other questions that are being discussed more in the lay press than in our own journals.

Dr. Shapo: That's right, and I think that we are arriving very gradually at a point where a lot more children will, as a functional matter, have lawyers when they are born. It seems to me in some ultimate political sense that what doctors are going to have to do is to get involved in the legislative process with respect to drafting statutes and contending for administrative interpretations that will allow them to respond to the dictates of humanity and compassion. One other theoretical point which I think has a very practical bearing on this question: One of the first questions I asked Dr. Shaw when he told me about this case was, "Who is paying for this child?" And I gather the answer is the Crippled Children's Bureau. Is that a State funded. . . .?

Dr. Shaw: That means you and I are paying for this child.

Dr. Shapo: That really closes the circle, and at least in theory emphasizes the necessity for legislation, even if the legislation in effect gives a large amount of discretion to the physician. But it seems to me that over the next five or ten years, in light of the developments that I described, and particularly in light of the judicial swing toward an emphasis on informed consent in adult cases, the law is likely to demand that doctors put these questions to parents. I can picture, for example, a judge saying, "Well, yes, you're right, that's a terrible burden to have to put on parents," and it is; but a judge may also reason by analogy that if the parents themselves have some kind of life-threatening illness, they would have to shoulder a terrific burden for themselves in making a decision about whether to have some kind of procedure, chemotherapy or something like that. It is not that I don't understand your feelings about it because I think I do, but I am trying to suggest how I think a court may react in those circumstances. However, any prediction of this kind is awfully tentative.

I might say that one other question that occurs to me is what theoretical difference there is—and there is a lot of argument about this, both legally and philosophically—between putting the child in a corner with a suction and putting an air bubble in it. I emphasize here the assumption that the fundamental decision is a morally justifiable one, which to begin with would be a very hard case to make. But even if that theoretical case is made, it seems to me that the problem that doctors really have to face in a question like this is that there is a kind of peculiar horror in the public mind —I think there is in my mind—with the notion of having a child—any child—left in a corner when more could be done for it. It is a justifiable horror, and it is compounded by the images of the gas chambers when we talk

about taking affirmative action to terminate a life. It is here that public perceptions merge with the most terrible memories of our recent history. The answer may not be clear in many of these situations, but I would suggest that we cannot ignore that background.

Brief Comment and Summary

Infants with severe physical deformities and mental retardation syndromes who have surgically correctable, but otherwise lethal malformations, such as intestinal atresia, present serious ethical and legal problems when their parents refuse to sign permission for life-saving surgery.

Although Dr. Shapo's reasoning with respect to the physicians' obligations and liabilities was by analogy because of the paucity of case law in this area at the time of the Surgical Grand Rounds discussion, in recent months a number of cases similar to the one presented here have been adjudicated in courts around the country. In many of these, the judges have ruled that the right to life is paramount and that surgery should be done. In at least one case a physician has been threatened with criminal charges under the state Child Abuse Law. Such decisions by judges and prosecuting attorneys highlight the importance of continued discussion among professional and lay groups of the ethical and moral problems in medical decision-making, in order to prevent the development of a body of rigid inflexible law which does not permit considerations of quality of life in judicial ruling.

Bibliography

1. Shaw, A.: Dilemmas of "Informed Consent" in Children. New England J. M. 289: 885-890, October 25, 1973.
2. Jehovah's Witnesses in State of Washington v. King County Hospital, 278 F. Suppl. 488 (W.D. Wash. 1967).
3. 390 U.S. 598 (1968).
4. Application of President and Directors of Georgetown College, 331 F. 2d 1000, 1009-1010 (D.C. Cir. 1964). Without opinion, the full court rejected a petition for rehearing, 331 F. 2d 1010. The Supreme Court denied certiorari, 377 U.S. 978 (1964).
5. Cf. Raleigh Fitkin - Paul Morgan Memorial Hospital v. Anderson, 42 N.J. 421, 201 A. 2d 537 (1964), *cert. denied*, 377 U.S. 985 (1964).
6. *See* Zelenko v. Gimbel Bros., 158 Misc. 904, 287 N.Y.S. 134 (1935), *aff'd without opinion*, 247 App. Div. 867, 287 N.Y.S. 136 (1936).
7. *See* Chrisafogeorgis v. Brandenberg, —— Ill. 2d —— 304 N.E. 2d 88 (1973).
8. *See* Delgato v. Yandell, 468 S.W. 2d 475 (Tex. Civ. App. 1971).
9. *See* Roe v. Wade, 410 U.S. 113 (1973).

Public Health ....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Lead Poisoning Detection

Lead poisoning is a preventable disease. Early detection of elevated blood lead is important in the prevention of mental retardation, minimal or profound, and possible death of children exposed to this environmental hazard.

The majority of cases of childhood lead poisoning occur to those between the ages of 12 to 36 months. Because of the extreme vulnerability of the central nervous system of infants and children, a relatively short period of exposure may be followed by severe symptoms. Encephalopathy may occur even before anemia, severe abdominal colic, or other symptoms have developed. The vagueness of the initial signs and symptoms contribute to the failure to diagnose cases of lead intoxication. Further, it should be emphasized that, even in the light of the present advanced state of medical knowledge, there is a low index of suspicion on the part of some physicians because of their belief that lead poisoning no longer occurs.

Since abatement of environmental hazard is a ponderous and long term project, and since early diagnosis of lead intoxication by clinical signs is difficult or impossible, the need for a reliable and biologically sensitive simple screening technique is clear.

Occurrence and Sources of Lead Poisoning

The majority of diagnosed cases have occurred in children aged 1-3 years who live in deteriorated pre-World War II housing in which lead based paints were used. Pica is also prevalent among these children. This combination of circumstance and symptoms has been found most often among poor inner city children. Further, studies have related pica to the quality of mothering by a passive dependent adult whose own dependency needs are unmet and who does not provide adequate attention to her children.

Other sources of lead poisoning include eating or drinking from pottery with a leaded glaze, inhalation of plaster dust during renovation of old houses and daily exposure to lead fumes near certain industries.

The Bureau of Environmental Science of the Division of Consolidated Laboratory Services in Virginia now offers individual clinical lead level determinations for children and adults under diagnostic study and treatment for lead intoxication. The laboratory will accept micro (finger prick) specimens collected under special conditions and mailed in special containers by local health departments; or a larger venous sample in a heparinized container.

Clinical Hazards

Modern medicine has significantly reduced mortality of acute lead poisoning, but at least ⅓ of the survivors sustain permanent irreversible brain damage. In recent years, there have been reports that even asymptomatic children with blood lead levels indicative of undue lead absorption have been found to show subtle signs of neurological deficit on subsequent evaluation. It is, therefore, important to identify children with high blood levels or undue absorption before they are symptomatic.

The Division of Consolidated Laboratory Services (DCLS) is now prepared to respond to local health needs for increased services in determination of lead level in blood and other materials. In the 1974-76 biennium budget, funds were authorized by Virginia General Assembly to enable the Division to allocate personnel and supplies specifically to this proj-

ect. Under the provisions of the Federal Lead Paint Poisoning Prevention Act (PL 91-695) the DCLS was invited to participate and to be designated as the state-wide laboratory to control the technical aspect of the program. An HEW Grant for additional equipment and supplies was provided for this purpose. This will increase laboratory capacity to support local programs to determine the extent of the lead problem.

The resources available without charge to the local health departments from DCLS as a result of this increase include:

(1) Availability of laboratory services to analyze for lead content in blood, urine and environmental samples for screening and monitoring purposes as well as specific acute or suspected cases of lead poisoning.
(2) Instruction in proper sampling techniques. This will include furnishing the key supplies to insure conditions free of contamination for fiscal year 1974-75 or as long as funds suffice.

More specific details of training programs will be furnished in the near future. Under terms of the grant, DCLS is responsible for:

(a) Specification techniques and material used in taking samples.
(b) An audit and quality control program covering sampling and testing.

Samples of specific suspected cases of lead poisoning will be accepted routinely, however, large scale screening programs are to be coordinated through Dr. Patricia Hunt, Bureau of Child Health, who will coordinate programs with the Division of Local Health Services and with the Bureau of Environmental Science of DCLS in scheduling work load to insure that laboratory capacity is not exceeded. This will help maintain reasonable turnaround times. Additional information may be obtained from Paul Mason, Deputy Director or Dr. Lester Seiden, Supervisor, Bureau of Environmental Science, Division of Consolidated Laboratories. (770-7746)

Post-Heart Attack Patients Benefit From Marathon Run

The benefit of vigorous exercise for post-heart attack patients is vividly illustrated in a report on eight men who recovered from attacks to run 26¼ miles in the Boston Marathon with no serious ill effects. The study is in the September 16 issue of the Journal of the American Medical Association, by a research group from the University of Toronto.

One of the eight became dizzy and dropped out midway in the race, but the other seven all completed the gruelling course at an average speed of 5.4 miles per hour. Signs and symptoms, both immediately after the race and later, were remarkably few.

The heart attacks were from one to four years prior to the endurance trial. All of the runners had been training for 8 to 12 months, running up to 45 miles a week at a slow steady pace, with some time spent in speedup runs. All were under careful medical supervision throughout their training, and during the race were followed by doctors in autos.

"We do not advocate marathon running as a casual pastime for the post-MI patient (myocardial infarction, or heart attack). However, even in those who are involved in jogging more modest distances, more thought will need to be given to regulation of body fluid balances."

An accompanying editorial in the Journal points out that "the benefits of physical training can be provided at the lowest possible hazard to high-risk cardiac patients by community programs offering medical facilities and supervision."

The University of Toronto report is by Terry Kavanagh, M.D.; Roy Shepherd, M.D., and Veena Pandit, M.D. The editorial is by Robert A. Bruce, M.D., of Seattle.

Mental Health . . . .

Chemotherapy and Coordinated Community Care in Reducing Rehospitalization of Schizophrenics

EDWIN S. ZOLIK, Ph.D.
IRVING LEVIN

Although hospitalization is considered as a transitional stage, less than half of all admissions into mental hospitals are being admitted for the first time (U. S. Department of Health, Education and Welfare, 1966). The consequent loss in terms of human resources is staggering. In order to maintain and increase the gains resulting from hospitalization, community mental health planners need to ascertain just what factors are likely to send a patient back to the hospital, as well as to develop programs which complement the efforts of the hospital. Coordination and continuity of service are two major avenues for increasing the effectiveness with which the needs of patients and families are met at the community level. The provision of care to schizophrenic patients during acute episodes only is far from adequate care (Katz and Cole, 1962).

This study reports the results of a community program which developed a coordinated network of caretaking agencies for the purpose of providing comprehensive and continuous services to patients returning to the community from a state hospital. The community area encompassed by the study was the Northern Virginia area in the State of Virginia and included the city of Alexandria, Arlington County and Fairfax County. The focus of the program was to develop a collaborative effort among community agencies and to orchestrate the services needed by patients and their families. In the process, study was directed to the needs and characteristics of schizophrenic patients and their families, patient responsivity to needed services, family interactions, and other dimensions. The inability to discriminate adequately patients who will be rehospitalized from those who will succeed (Freeman and Simmons, 1963) indicates the continuing need for comparative studies of patients.

Zolik, Edwin S., *Ph.D., Chairman, Department of Psychology, DePaul University, Chicago, Ill.*

Levin, Irving, *Social work and Counselor, American School, Paris, France.*

Approved for publication by the Commissioner, Department of Mental Health and Mental Retardation.

Method and Procedure

The study sample consisted of 68 schizophrenic patients who were released by the hospital over a 1½ year period and who resided in the area covered by the community project. Upon release by the hospital these patients were transferred to the project patient group for a minimum of one year unless they were rehospitalized. The patient's initial community treatment program was formulated in conjunction with the hospital and subsequently was modified whenever necessary to meet specific patient and family needs. The community services needed by the patient were arranged by the project social worker who maintained a continuous close relationship with the caretaking agencies, the patients, and their families. By monitoring the patient's progress, the service needs of patients were expedited, patient and family response to recommended services assessed, and the overall treatment program coordinated.

The sample of 68 patients consisted of 47 females and 21 males; 32 patients were single and 36 patients were married. During the

course of the first post-hospital year 22 patients (32 per cent) were rehospitalized. Patients and their families were rated on 84 rating scales, a number of which were obtained from the Freeman and Simmons (1963) questionnaire. Ratings were made by the social worker on the basis of detailed information he maintained on the numerous contacts and interviews with the patient, his family, and each agency providing a service. Unless the patient was rehospitalized, all ratings were completed at the 11-month period. Reliability of ratings on 30 scales requiring clinical judgments was investigated by rerating 10 cases after a one-week interval. Test-retest reliability coefficients ranged between .87 and .96. Chi-square corrected for continuity and Fisher exact probabilities were used to test for significance. Thirty-four significant differences between the rehospitalized and nonrehospitalized schizophrenics were obtained.

Results and Discussion

General Characteristics and Background of Patients

In this study, demographic variables were unsuccessful in predicting whether a schizophrenic would be rehospitalized. There were no significant differences between rehospitalized and nonrehospitalized schizophrenics in marital status, religious affiliation, or socioeconomic status. Michaux et al (1969) similarly reported that age, sex, number of children, religion, and occupation showed virtually no predictive relations to rehospitalization.

Prior hospitalization history, however, did reveal differences. Significantly more rehospitalized schizophrenics: (a) had been hospitalized for more than six months during their last hospitalization ($p < .0001$); (b) had more previous hospitalizations over fifteen days ($p < .021$); and (c) had been hospitalized for more than six months during this hospitalization ($p < .0001$). Rehospitalized schizophrenics tended ($p < .053$) to have been hospitalized longer than six months prior to their last hospitalization. Michaux et al concluded that the number of prior hospitalizations was the "most consistently powerful background variable in our whole series of prediction analyses" (p. 127).

A number of comparisons of characteristics during the six month period preceding hospitalization were made. There were no differences between the two patient groups on the following characteristics during the six month period preceding the patient's last hospitalization: (a) financial dependence on others vs. financial independence; (b) family stability vs. instability; (c) patient's stability vs. instability as a family member; (d) community outpatient treatment vs. no treatment prior to the last hospitalization; (e) hostile, aggressive behavior vs. other behavior patterns resulting in hospitalization. However, significantly more "successful" (not rehospitalized) patients had a better employment history in the six month period preceding the last hospitalization ($p < .02$). Michaux et al also reported "a meager yield of useful predictive" variables among early life-situation variables (p. 134). The prominent exception in both studies was a measure of economic performance: more successful patients had a better employment history in the six month period preceding the last hospitalization ($p < .018$) in this study; similarly, Michaux et al found contribution as a breadwinner to be the only life situation variable predicting rehospitalization at the .05 level.

Upon release from the hospital, the majority of patients in both groups returned to the same living arrangement from which they were hospitalized; this was either the parental or conjugal family unit. There was no overall difference between the two groups regarding whether the patient worked during his furlough period; the majority of patients in both groups either worked less than half time or were not gainfully employed. There was a tendency ($p < .06$) for the rehospitalized schizophrenics' employability to be limited by their psychiatric condition. The majority of patients in both groups were at least partially financially dependent on others for their support.

Treatment Needs During Furlough

The psychotropic drugs have altered the face of treatment for schizophrenics and made short term hospitalization and outpatient treatment commonplace. A number of comparisons were made on patient responsiveness and attitudes toward chemotherapy. Significantly more rehospitalized schizophrenics did not follow their prescribed medication program ($p < .03$); they were more irregular in taking their medication, they decreased the amount or frequency of medication more often, or they simply refused to take their medication more often. The majority of patients in both groups who self-terminated their medication either denied their illness or said that drugs were not needed. Although there were no significant differences in the degree to which patients felt that drug therapy was important in their aftercare program, significantly more ($p < .005$) rehospitalized patients had a greater degree of conflict with their responsible relative over not taking the medication regularly or faithfully.

Michaux et al reported that among relapsers chemotherapy had been discontinued for a substantial number of patients. It was their opinion that uninterrupted drug prescriptions would have averted rehospitalization in some if not all cases (p. 107).

As the community program was concerned with providing comprehensive, integrated services, an analysis was made of the type of services required by the patients. Rehospitalized and nonrehospitalized schizophrenics showed no significant differences in the proportion of patients requiring maintenance chemotherapy, individual psychotherapy, individual social casework, family social casework, public health nursing home visits, pastoral counseling, employment assistance, homemaker services, legal counseling, nursing home placement, and financial assistance. A significantly greater percentage of rehospitalized schizophrenics needed group psychotherapy ($p < .02$) and vocation rehabilitation ($p < .03$), which suggests social interaction deficiencies.

Although professionals may assess the patient as needing a specific service, the acceptance of this service and the utilization of the service by the patient and his family is of greater importance to the eventual outcome. Accordingly, both of these dimensions were evaluated. In assessing the relative acceptance of prescribed services by the two groups, no significant differences were found for the following services: maintenance drug therapy, individual psychotherapy, group psychotherapy, individual social casework, family social casework, public health nursing, and vocational rehabilitation.

With respect to assessing the relative utilization of services of the two groups, no significant differences were found in the utilization of individual psychotherapy, group psychotherapy, individual social casework, or family social casework; this holds true whether one evaluates the utilization of services on a not-at-all vs. some basis or on a fairly frequently vs. less basis. Maintenance phenothiazine therapy was more discriminating, however; more nonrehospitalized schizophrenics utilized maintenance phenothiazine therapy. Significantly more ($p < .03$) rehospitalized schizophrenics were characterized by a low degree of motivation to be helped, considerable passivity ($p < .05$) in following through with a referral, and less usage of the available aftercare services offered by the community ($p < .03$). These results indicate that acceptance of services and the relative utilization of services are not equivalent and that the patient's relationship to his chemotherapy program is crucial.

Patient Behavior Within the Family

Most of the patients (82 per cent) in this study returned to either the parental or conjugal family unit. As readmission is extremely frequently initiated by a relative of the patient, it is not surprising that community tenure, in part, is dependent upon familial interactions. The nonrehospitalized schizophrenics were reported to be more reliable regarding chores during furlough ($p < .0001$), more

cooperative regarding chores ($p < .003$), and less of a management problem for the family ($p < .001$). Rehospitalized schizophrenics manifested more dependence during their furlough ($p < .05$). Their successful counterparts' families more consistently reported the patients' social performance to be adequate ($p < .0001$).

No significant difference existed between the two patient groups in the relative degree of hostility manifested during the furlough. Nonrehospitalized schizophrenics maintained a greater degree of contact with the project ($p < .03$) and were more inclined to rely on themselves rather than others for initiation and direction of activities ($p < .05$). They were more socially adjusted ($p < .0001$) in that they more often made good social contact, or when they manifested anxiety they were more able to control it.

Behavior and Characteristics of Family

Rehospitalized schizophrenics' families were characterized by considerable disagreement and contention ($p < .003$). Rehospitalized patients consciously used their illness to manipulate the family more often ($p < .04$). Successful schizophrenics' families showed more understanding ($p < .05$) and the patient's performance met the relatives' expectations to a greater degree ($p < .005$). These families were less likely to reject the patient ($p < .004$) and they showed less shame and embarrassment at having the patient in the community ($p < .03$).

These findings are consistent with the family interactional model proposed by Jackson and Weakland (1970). Bateson, their coworker, noted that in spite of gross cultural abnormality within the family circle, the family maintains stability in its external appearances and respectability—a stability not generally present in normal families. Experimental verification of this was reported by Rkiss and Elstein (1971), who tested the families of diagnosed schizophrenics with a battery of perceptual and cognitive tasks, and reported that most families with schizophrenics rigidly applied limited or conservative generalizations in construing the environment in order to impose stability on it, and that they showed a strong preference for conventional rather than personal reality. Within this framework, patients who refuse to mesh with the conservative interactional patterns by not doing chores or otherwise denying their assigned roles probably would not long remain outside the hospital. Bateson's observation that the only calibrations that seem to be viable in schizophrenic families are at the very low level of individual habit formation and at the highly superficial level of external appearances is consistent with these findings.

Our findings are supportive of the formulation that the family of a schizophrenic, or the schizophrenic family system, clings conservatively to order and external appearances. It is as though the families of the unsuccessful schizophrenic patients were further along the schizophrenic continuum as described by Jackson, Weakland, and Bateson.

There were no significant family differences between the two groups for the following variables: hostility by the relative toward patient or hospital, fear of the patient, conflict among relatives over the patient's needs, or the degree to which the family wanted rehospitalization of the patient because of psychiatric symptoms or social behavior.

Discussion and Conclusions

The establishment of a coordinated network of comprehensive services within the community made it possible to considerably reduce the rehospitalization of schizophrenic patients; 68 per cent of the patients remained in the community. As indicated by Pasamanick, Scarpitti, and Dinitz (1967), continuous community care of schizophrenic patients probably is the only type of prevention available at present. Zolik and Lantz (1968) have indicated the importance of prerelease community referrals, in that rehospitalization rates do not differ whether referral is to a mental health service or other community agencies such as public health nursing, welfare, family services,

etc., but that rehospitalization rates about double when the patient is not linked into the community service system.

As chemotherapy is a major aftercare treatment modality for schizophrenics, the results indicate the need to inculcate a positive attitude on the part of patients and their families toward drug maintenance programs, along with the development of comprehensive community programs which reach out to these patients. On the basis of the experience and success achieved in this project, it was recommended that in each area of the state a specific person in a community clinic or in a public health agency be charged with coordinating all services required by formerly hospitalized patients. This procedure was preferred to developing a separate small agency charged with providing aftercare services inasmuch as such an agency would experience difficulty in obtaining services for patients from other well established agencies, which in the past too often had not been responsive to the needs of these patients. In addition, since many patients had difficulty in paying for their medication, or utilized the cost as a point of resistance, it was recommended that patients be provided drugs either at no cost or on a sliding scale based on their ability to pay, and that a centralized medication distribution office could service the entire state at a lower cost. All three recommendations were implemented (Jackson, G., 1973); medication is provided by a central aftercare pharmacy and each state-aided clinic was fully funded by the state for an aftercare worker whereas the funding of the other clinic programs is shared between the state and local resources. This statewide program served 7,500 patients in 1972.

Results regarding role performance and tolerance of deviance parallel those reported by Freeman and Simmons (1963), Pasamanick, Scarpitti, and Dinitz (1967), and Sanders, Smith and Weinman, (1967). Other results, such as the usefulness of the number of prior hospitalizations in differentiating between the two groups and the lack of significant differences for variables like age, sex, religion and occupation are consistent with results reported by Michaux, Katz, Kurland, and Gansereit (1969).

Families of successful and unsuccessful schizophrenics do not differ so much on variables like hostility toward patient or hospital, fear of the patient, but they do differ in the degree to which family expectations and patient performance overlap.

The number of characteristics differentiating the families of rehospitalized and nonrehospitalized schizophrenics suggests the need for increased attention in community programs to familial relationships and that assistance to families in developing realistic expectations is required if further reductions in the level of readmission are to be achieved.

This paper was presented at the IX Congress of the Collegium International Neuropsychopharmacologium; Paris, July 7-12, 1974.

This investigation was supported in part by a grant from the U. S. Public Health Service, National Institute of Mental Health, and in part by a grant from Smith, Kline, and French, Inc.

References

Freeman, H. and Simmons, O.: The mental patient comes home. New York: Wiley, 1963.

Jackson, D. and Weakland, J.: Schizophrenic symptoms and family interaction, in Therapy, Communication, and Change. Palo Alto: Science and Behavior Books, Inc., 1970.

Jackson, G.: Relapse rate reduced by state aftercare program. Hospital and Community Psychiatry, 1973, 24, 807.

Michaux, W., Katz, M., Kurland, A., and Gansereit, K.: The first year out: mental patients after hospitalization. Baltimore: Johns Hopkins Press, 1969.

Pasamanick, B., Scarpitti, F., Dinitz, S.: Schizophrenics in the community. New York: Appleton-Century-Crofts, 1967.

Reiss, D. and Elstein, A.: Perceptual and cognitive resources of family members. Arch. Gen. Psychiat. 1971, 24, 121-134.

Sanders, R., Smith, R., and Weinman, B.: Chronic psychoses and their recovery. San Francisco: Jossey-Bass, 1967.

United States Department of Health, Education and Welfare. Provisional patient movement and administrative data, state and county mental hospitals. U.S., 1965, in Mental Health Statistics. (Series MHB-H-10) Washington, D. C.: U. S. Government Printing Office, 1966.

Wilkinson, C. and Hornstra, R.: Characteristics of aftercare patients. Dis. Nerv. System 1969, 30, 246-250.

Zolik, E. and Lantz, E.: Hospital return rates and prerelease referrals. Arch. Gen. Psychiat. 1968, 18, 712-717.

Cystinosis and Other Genetic Metabolic Diseases

The cooperation of physicians is requested in the referral of patients with cystinosis (cystine storage disease) and other hereditary disorders involving abnormal metabolism of sulfur-containing compounds, for a continuing comprehensive study being conducted by the National Institute of Child Health and Human Development at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Selected patients with various other known or suspected genetic metabolic diseases, including but not limited to inborn errors of amino or organic acid metabolism, are also needed.

Patients with cystinosis will be admitted to the Clinical Center for evaluation of disease status, and will be eligible for entering into experimental therapeutic protocols for medical treatment of this usually fatal disorder. Protocol drugs will be those which have demonstrated a capacity to decrease cystine storage in cells of affected individuals when these cells are propagated in tissue culture.

In addition, cystinotic patients will be offered the opportunity to participate in studies designed to elucidate the nature of the underlying biochemical derangement in this disorder, and to increase understanding of the serious secondary effects of this primary defect.

Diagnostic services, medical therapy, genetic counseling, and opportunities for antenatal diagnosis will also be provided to selected patients and their families in whom the presence of other heritable metabolic diseases are known or suspected. Participation will be offered in clinical research programs aimed at understanding the causes of such diseases, and developing methods for their improved therapy and early diagnosis.

Upon completion of studies at the Clinical Center, patients will be returned to the care of their referring physicians who will receive full reports of the investigations done, appropriate recommendations concerning therapy, and opportunities for continuing communication with National Institutes of Health investigators concerning these patients.

Physicians interested in having their patients considered for study, or with questions regarding patients in their care, may write or telephone: Joseph D. Schulman, M.D., Clinical Center, Room 13N-256, National Institutes of Health, Bethesda, Maryland 20014. Telephone: (301) 496-6683 *or* (301) 496-4686.

The Medical Society of Virginia . . . .

Minutes of Council

A meeting of the Council of The Medical Society of Virginia was held in Fredericksburg at the Holiday Inn North on Wednesday, October 16.

Members Present: Dr. John A. Martin, Dr. William R. Hill, Dr. Carl E. Stark, Dr. William J. Hagood, Jr., Dr. Harold L. Williams, Dr. Charles E. Davis, Jr., Dr. Carrington Williams, Jr., Dr. George J. Carroll, Dr. Girard V. Thompson, Sr., Dr. H. C. Alexander, III, Dr. George M. Nipe, Dr. Harry C. Kuykendall, Dr. James Hal Smith and Dr. W. Leonard Weyl.

Others Present: Dr. James C. Respess, 2nd Vice President; Dr. K. K. Wallace, Jr., Vice-Speaker; Dr. Walter A. Eskridge, Dr. Gervas S. Taylor, Jr., Dr. Harry L. Westfall, Jr., Dr. C. Barrie Cook, Vice Councilors; Dr. W. Callier Salley, Dr. William S. Hotchkiss and Dr. Michael A. Puzak, AMA Delegates; Dr. Percy Wootton, Dr. F. Ashton Carmines, Alternate AMA Delegates; Dr. J. W. Craig, representing Dr. William R. Drucker, Dean, University of Virginia School of Medicine; Dr. Richard E. Davis, Associate Dean, Eastern Virginia Medical School, representing Dr. Robert T. Manning, Dean; Dr. Warren H. Pearse, Dean, Medical College of Virginia; Mr. Gary Miller and Mr. James McCoy, representing MCV Student Medical Society; Dr. Eugene R. Perez, Executive Director, Virginia Regional Medical Program; Dr. Robert G. Stuart, Executive Secretary, VaMPAC; and Mr. Guy D. Beaumont, Jr., AMA Field Service Representative.

VaMPAC

It is Council's responsibility to elect each year a Board of Directors for the Virginia Medical Political Action Committee. *A motion by Dr. Stark to elect the following slate was seconded and adopted:*

DISTRICT CHAIRMEN

1st: Frank Chambers Robert, M.D., Hampton
2nd: Clarence B. Trower, Jr., M.D., Norfolk
3rd: Henry S. Spencer, M.D., Richmond
4th: Robert Sullins Smith, M.D., Dinwiddie
5th: Girard V. Thompson, Sr., M.D., Chatham
6th: Charles A. Young, Jr., M.D., Roanoke
7th: Dennis P. McCarty, M.D., Front Royal
8th: Alvin E. Conner, M.D., Manassas
9th: George R. Smith, Jr., M.D., Shawsville
10th: Michael A. Puzak, M.D., Arlington

MEMBERS-AT-LARGE

1st: James R. Howerton, M.D., Newport News
2nd: Clarke Russ, M.D., Virginia Beach
3rd: Harold I. Nemuth, M.D., Richmond
4th: Arthur A. Kirk, M.D., Portsmouth
5th: A. Epes Harris, Jr., M.D., Blackstone
5th: Mrs. Robert D. Keeling, Woman's Auxiliary, South Hill
6th: James P. Harnsberger, M.D., Hot Springs
7th: Walter Copley McLean, M.D., Charlottesville
8th: Thomas L. Lucas, M.D., Alexandria
9th: Walter B. Waddell, M.D., Galax
10th: Ira D. Godwin, M.D., Fairfax
10th: Mrs. Marianne Quinnell, Woman's Auxiliary, McLean
10th: W. Leonard Weyl, M.D., Arlington

Bank Cards

Council, during its meeting on July 31, had suggested that Society policy with reference to the use of bank cards be reviewed. For the past several years the Society has approved the use of such cards as long as they are used in accordance with those guidelines established by the American Medical Association.

It was brought out that the use of bank cards has posed a problem in some areas and that it is most important that the local medical society be satisfied as to the financial and professional integrity of the various plans. The AMA guidelines stress this point quite strongly.

A motion by Dr. Stark to reaffirm the Society's current policy was seconded and adopted.

Legislative Meetings

It was recalled that meetings at the District level were held with members of the General Assembly prior to the 1974 session of the Assembly. The meetings were apparently quite successful and Mr. Osburn reported that they undoubtedly had a great deal to do with the cooperation he received from various legislators.

It was agreed that the meetings should be held again and scheduled for either late November

or early December. *A motion to this effect was seconded and carried.*

Miss Hope

The American Cancer Society, Virginia Division, will soon select its second "Miss Hope of Virginia" to serve as a representative of that organization carrying special messages on cancer about the state. The Society has again been invited to contribute to a special "Miss Hope" scholarship fund.

There was considerable discussion concerning current demands on the Society's budget and it was the consensus that contributions of this nature should be left to the individual—at least for the moment. It was pointed out that physicians make many contributions to the Cancer Society—both financially and timewise. Consequently, a motion was offered by Dr. Davis which would have the Society decline the invitation this year. *The motion was seconded and adopted.*

1975 Travel Program

The time has come for the Society to give serious consideration to its travel program for 1975 and Dr. Hill reported that a number of proposals have been received—all very attractive. Brought out was the fact that the Society has used the services of INTRAV from the very beginning and all of the trips have been excellent and unusually well received.

The INTRAV proposal for 1975 features an air/sea tour of either the Holy Lands or Western Mediterranean. The main portion of the tour would feature approximately 11 days aboard the "Golden Odyssey", a luxury cruise vessel launched in July of this year. Departure would be in late April or early May.

It was agreed that a final decision should be left to Dr. Hill. A definite decision is expected within the next three weeks.

Statement of President of American Pharmaceutical Association

During his inaugural address, the new president of the American Pharmaceutical Association reportedly made some statements which aroused the ire of many physicians. Included in his remarks was the accusation that AMA and other medical associations prevent the selection of drug products on the basis of reasonable cost. He charged that organized medicine defends the irrational prescribing habits of physicians. Among his proposals was that calling for pharmacists to assume the task of selecting those drugs which should be dispensed.

It was learned that the Society's Pharmacy Committee had reviewed the address and offered several recommendations. The Committee recommended that the address be reprinted and commented on editorially in the Virginia Medical Monthly, that a study commission be appointed to investigate pharmacy's recent attacks on medicine and that appropriate action be initiated at the AMA level.

A motion to accept and implement the recommendations of the Pharmacy Committee were seconded and adopted. It was made clear that AMA would be contacted concerning an investigation to be carried on at that level.

Dr. Hagood expressed the feeling that the Society should reaffirm its opposition to any and all efforts to enact legislation permitting substitution of drugs. He then introduced a motion which would have a resolution opposing such substitution introduced in the House of Delegates. *The motion was seconded and adopted.*

Alexandria Pharmacy Bulletin

The attention of Council was called to a bulletin distributed by the Alexandria Medical Arts Pharmacy to its customers. The bulletin states that the pharmacist is qualified by formal education and training to provide certain services. Included is an offer to provide assistance in determining whether the patient need continue a certain medication that the physician indicated could be refilled as needed.

The bulletin had also been reviewed by the Pharmacy Committee which recommended that it be referred to the State Board of Pharmacy for interpretation and appropriate action. *A motion by Dr. Weyl approving the Committee's report and recommendation was seconded and adopted.*

A follow up resolution which would also refer the bulletin to the State Board of Medicine for its interpretation was seconded and carried.

HR16204

One of the most important bills to come before the Congress in a long time is HR16204. The bill creates a highly structured planning, resources development and regulatory program—placing tremendous authority in the hands of the Secretary of HEW. This all inclusive piece of legislation would phase out regional medical, comprehensive health planning and Hill Burton programs. In their place would be established a national council for health policy.

It was reported that the bill is now before the Rules Committee of the House and the time for action is at hand. It was the Legislative Com-

mittee's recommendation that all members of Virginia's Congressional delegation be contacted and advised of the basic objections to the bill.

Although it was reported that many Congressmen believe no action will be taken by the Congress until after the November elections, it was the consensus that the recommendations of the Legislative Committee should be carried out. *A motion to this effect by Dr. Davis was introduced and seconded.*

Dr. Kuykendall believed that any reference to certificate of need should be eliminated and it was agreed that this would be done. *Dr. Davis's motion was then adopted.*

Upon being advised that the bill would probably result in total Federal control by 1980, Council requested that each member be provided a complete summary of its contents. Dr. Perez indicated that summaries would be placed in the mail immediately.

Press Coverage of Mrs. Ford's Illness

It was learned that some rather strong objections had been voiced by a number of physicians concerning the manner in which Mrs. Ford's condition and treatment had been handled by the media. One member had called to say that, in his opinion, some patients had been adversely affected by the "frightening" tone of newspaper and television accounts.

While it was agreed that some of the complaints were undoubtedly justified, it was the general feeling that very little could be accomplished by making an issue of the matter at this time. It was agreed, however, that a positive effort should be made to establish better working relationships with science writers in the various communities.

A motion by Dr. Hill to table was seconded and adopted.

Insurance Study

The Society has, over the years, approved a good many group insurance programs for its members. Some of them have undergone considerable change as a result of legislation, growth problems, etc. Consequently, there have been problems in some areas and it is the feeling of the Insurance Committee that a study of our overall insurance program is in order. It was learned that Meidinger and Associates, a well known insurance consulting firm, has submitted a proposal which the Committee finds attractive. The cost for such a study would be approximately $3,000.

A question was raised as to whether a complete study should be made or whether it should be restricted to the various retirement programs. Following considerable discussion, it seemed to be the consensus that a study of the overall program would undoubtedly pay dividends.

A motion by Dr. Weyl to authorize an in-depth study of the overall program was seconded and adopted. It was agreed that the study would take into consideration other programs available to the membership—particularly those sponsored by AMA, Southern Medical Association, etc.

Annual Report of Virginia Professional Standards Review Foundation

The Foundation's annual report was made available to Council as required by Article IX of the Foundation's By-laws. It was brought out that the report must also be submitted to the House of Delegates.

A motion by Dr. Stark to accept the report was seconded and adopted.

Directors of Virginia Professional Standards Review Foundation

Council was advised that the By-laws of the Foundation provide that an annual election meeting must be held within one month following the Annual Meeting of The Medical Society of Virginia. Consequently, it was necessary for Council to elect two members of the Society to serve on the Board of the Foundation for a period of three years.

Dr. Robert Keeley, Roanoke, and Dr. William O'Brien, Charlottesville, were then nominated and elected.

Attendance At Council

Dr. Martin reported that the Woman's Auxiliary would like very much for its President, or her representative, to attend meetings of Council in order that the best possible liaison could be maintained. He also called attention to the fact that a representative of the Medical College of Virginia Student Medical Society has been attending meetings of Council and that the University of Virginia School of Medicine is anxious for its Mulholland Society to have this privilege. Brought out was the fact that a charter was issued several years ago to a University of Virginia Student Medical Society. Unfortunately, it has become virtually inactive.

A motion was then offered by Dr. Stark which would invite a representative officer from each student component society to attend meetings of Council as observers. It was made clear that the

Eastern Virginia Medical School should be included. *The motion was seconded and adopted.*

It was then moved by Dr. Weyl that the Woman's Auxiliary be invited to have a guest observer at future meetings of Council. *The motion was seconded and carried.*

Financial Support For Student Medical Societies

The Medical College of Virginia Student Medical Society has requested that The Medical Society of Virginia provide financial assistance in sending representatives to AMA meetings and the Annual Meeting of The Medical Society of Virginia. Brought out during the discussion was the fact that the College, itself, is assisting a number of student organizations and is finding it difficult to carry the full load. The thought was expressed that the students themselves must accept their fair share of responsibility.

It was then moved by Dr. Hagood that The Medical Society of Virginia pay one-half of the expenses of one student delegate to annual and interim meetings of AMA. Proper accounting would be expected and the amount contributed would be negotiable each year. *The motion was seconded and carried.*

Council then adopted a motion by Dr. Stark expressing reluctance to establish a precedent where our own Annual Meetings are concerned. The motion called attention to the fact that expenses are not paid for delegates from other component societies and that an exception would be difficult to justify. Representation from the student societies, however, was encouraged. *The motion was seconded and adopted.*

HMO's

Dr. Thomas Murrell, a Past President of The Medical Society of Virginia, reported the results of a study he had made of HMO's. His comments were made as a result of a decision by Council on July 31 to take a close look at the HMO situation in view of an announcement by the Medical College of Virginia that it was planning to establish such an organization.

Dr. Murrell indicated that the label "Health Maintenance Organization" is a misnomer. He pointed out that no evidence exists to prove that Kaiser-Permanente has ever reduced morbidity rates. He stated that HMO's are damaging to the physician-patient relationship, contrary to the traditional fee for services concept, discourage freedom of choice, results in considerable physician turnover and in many instances make captives of young physicians. Although the principal objective of an HMO seems to be to keep costs down, the experience of Kaiser-Permanente does not indicate that the system really saves money. It was also stated that HMO legislation is very restrictive and sets up a system of health care controlled by federal regulation. It was Dr. Murrell's opinion that HMO's will make eventual control of the profession much easier for government.

Dr. Pearse, commenting on the Medical College of Virginia sponsored project, indicated that three definite stages are involved. The first involves a feasibility study, the second is the planning stage and the third involves the operational aspects. He stressed that there is no guarantee at the moment that the program will actually go beyond the planning stage. Dr. Pearse also stated that the Medical College of Virginia has a threefold interest in the project. It is interested in the overall educational aspects, an opportunity to study another model of health care delivery and a possible means of upgrading health care services for college personnel. The program, should it become operational, would be optional.

Following considerable discussion, it was moved by Dr. Hagood that Council approve an effort to educate the public concerning HMO's and that the matter be brought to the attention of the House of Delegates for final consideration and such specific action as might be indicated. *The motion was seconded and adopted.*

National Health Insurance

A question has been raised concerning what role The Medical Society of Virginia could and should play where national health insurance is concerned. Dr. Murrell, speaking on behalf of Blue Shield of Virginia, stated that the time has come to take firm action if national health insurance is to be successfully opposed. He pointed out that no grass root demand for NHI has been demonstrated and that 80 percent of the population is currently covered under private health insurance plans. He went on to say that national health insurance would almost surely compound the inflation problem, add thousands of employees to the federal payroll and materially increase the national debt. He added that very few Americans realize that NHI would be compulsory in nature and that the confidentiality presently existing between physician and patient would be seriously threatened.

Indicating that the voter must somehow be reached on this important question, Dr. Murrell stated that Blue Shield is prepared to provide the expertise necessary to develop publicity, campaign material, etc. Speakers would also be provided for the purpose of carrying the message

directly to the people. It was requested that a special committee on the subject be appointed for the purpose of working with Blue Shield.

Dr. Stark then moved to accept the challenge and proposal presented by Dr. Murrell. *The motion was seconded by Dr. Kuykendall and adopted.*

Cancer Control Program

Dr. Perez reported that the Virginia Regional Medical Program is carrying on a full slate of activities and its existence is assured through July, 1975. He stated that the tumor registry is doing quite well with 12 hospitals participating at the moment. Two others are expected to join the group in the very near future.

Dr. Perez expressed the hope that the Society would approve a Cancer Control Program to be conducted under the auspices of the National Institute. The program would be concerned with prevention, diagnosis, and treatment and would demonstrate the latest developments in the cancer field. The report was presented by Dr. Perez as a matter of interest and information.

High Blood Pressure Program

It was recalled that Council, during its last meeting, had been requested to approve a program on high blood pressure proposed by the Department of Pharmacy of the Medical College of Virginia. There was considerable feeling at that time that the program represented an infringement on the practice of medicine. As a result, Dr. James McKenney, Director of the proposed program, was invited to meet with Council and explain the proposal in more detail.

Dr. McKenney was accompanied by Dr. Warren E. Weaver, Dr. Albert Wasserman and Mr. Eugene White. Dr. Weaver pointed out that the Medical College of Virginia has the only school of pharmacy in the state and that its students have been involved in a limited pilot study of hypertension.

Dr. McKenney stated that the objective of the program was better patient care and that a detailed overall report would be prepared at its conclusion. He expressed the feeling that services covered under the program did not constitute an invasion of the practice of medicine and indicated that the Attorney General's Office seemed satisfied that the proposal did not violate the Medical Practice Act. It was made clear that the program would not be carried out without Society approval.

Following considerable discussion, it was moved by Dr. Kuykendall that Council endorse the concept of screening previously unidentified hypertensive patients. The motion also stated that Council was unable to find sufficient justification for an RMP grant in the amount of $45,000. The motion concluded by requesting that Virginia's pharmacists not hesitate to inform the Society should they identify a less than optimal performance on the part of physicians when prescribing for their patients. *The motion was seconded and adopted.*

Pharmaceutical Association Workshops

The Virginia Pharmaceutical Association recently received a grant from the Virginia Regional Medical Program for the purpose of conducting workshops on such subjects as "Prevention and Control of Venereal Disease" and "The Role of the Pharmacist in Family Planning Education." The Association was anxious to obtain approval of Council and thereby eliminate any misunderstanding which might later occur.

Although the proposed workshops were discussed quite thoroughly, Council was unable to establish sufficient justification from the medical point of view. Consequently, *a motion by Dr. Stark to table was seconded and adopted.*

Dental High Blood Pressure Program

Dr. Louis Abbey, School of Dentistry, Medical College of Virginia, has requested Society approval of a hypertension detection program developed with the cooperation of the Virginia Regional Medical Program. The proposed project would offer continuing education workshops in each of the eight districts of the Virginia Dental Society. Workshop teams would consist of a physician, two dentists and a registered nurse. The workshops would cover basic reviews of cardiovascular physiology and its relationship to dental therapy, a review and practice session on the technique of blood pressure measurement and a description of the current screening and follow up program currently being carried on at the MCV School of Dentistry.

There was some feeling that this particular program should be approved and a motion to this effect was offered by Dr. Stark. After further discussion a substitute motion was introduced by Dr. Weyl requesting that any definitive action be deferred until additional information could be obtained from Dr. Abbey. *The substitute motion was adopted.*

CPT

Dr. Hulley brought Council up to date on the progress Blue Shield of Virginia has made in converting to the physicians' current procedural terminology as developed by AMA. The con-

version is proceeding on schedule. Dr. Hulley expressed some concern, however, over the copyright and warranty aspects of CPT. Thus far, AMA has failed to provide absolute assurance that no copyright problem exists.

Dr. Hulley went on to report that Blue Shield also plans to use the new simplified claim form developed by AMA. It was his hope that The Medical Society of Virginia will support and promote its use.

Judicial Merit

The Virginia Association of Professions has endorsed a judicial merit selection bill which would create a judicial nominations commission. VAP is asking its member associations to also endorse this proposed legislation.

Some concern was expressed as to whether a bill of this nature would seriously and unnecessarily limit the government's power to appoint judges. As a result, a motion was made by Dr. Stark to table. *It was seconded and adopted.*

PSRO Computer Support

Dr. Martin called the attention of Council to a letter from Dr. Carrington Williams, Jr., having to do with the selection of a computer support service for the PSRO operation in Virginia. There was some question as to whether the computer services required should be provided under a contract with Blue Shield or whether other providers of such services should be considered. The matter was brought to Council as a matter of information only since the final decision will quite likely be made by the Board of Directors of the Virginia Professional Standards Review Foundation.

Future Meetings of Council

Dr. Martin advised that Council will hold a short meeting at Williamsburg on November 3 for the purpose of reviewing a report by the Finance Committee. A proposed budget for 1974-75 will also be reviewed at that time.

A question was raised concerning the next regular meeting of Council and Dr. Davis moved that it be held in Richmond. *The motion was seconded and adopted.*

Chairmen of Delegations

Dr. Davis expressed an interest concerning those to be named as chairmen of the various district delegations during the upcoming meeting at Williamsburg. He requested the Speaker to consult with the District Councilors before any final decisions were made. The Speaker indicated that he would be pleased to cooperate and asked that the District Councilors make their wishes known to him as soon as possible.

Dr. Salley

It was with regret that Council learned that Dr. Salley would not stand for reelection as a delegate to AMA. A motion was offered by Dr. Weyl expressing appreciation of Dr. Salley's many years of service and requesting the Executive Vice President to prepare a resolution of appreciation for introduction in the House of Delegates. *The motion was seconded and carried.*

National Rural Health Conference

Dr. Stark reminded Council that the AMA National Rural Health Conference would be held in Roanoke in 1975 and asked for its help in making it one of the best.

There being no further business, the meeting was adjourned.

Robert I. Howard, *Secretary*

Approved:
John A. Martin, M.D., *President*

Woman's Auxiliary . . . .

President.....Mrs. Randolph H. Hoge

President-Elect..Mrs. Harold L. Williams, Jr.

Vice-Presidents.....Mrs. William N. Gordge
Mrs. L. C. Strong, Jr.
Mrs. Richard F. Clark

Recording Secretary....Mrs. Charles C. Freed

Corresponding Secretary
Mrs. F. Sterling Davis, Jr.

Treasurer.....Mrs. Charles G. Smith

Publicity.....Mrs. William A. Cook, Jr.

Eastern Regional Workshop

Eight Virginia delegates attended the 1974 Eastern Regional Workshop—A Program Talk Shop—October 21-22 at the Pittsburgh-Hilton Hotel, Pittsburgh. Virginia was also represented by Mrs. Daniel Anderson, Eastern Regional vice president, and Mrs. William J. Reardon, Eastern Regional AMA-ERF chairman.

A total of 111 delegates from fourteen states met together with national and regional officers and directors in a program designed to provide opportunity for enrichment and idea exchange in the areas of leadership, AMA-ERF, legislation, health education, family health, community health and communications.

Officers and chairmen from Virginia attending were Mrs. Randolph H. Hoge, Mrs. L. C. Strong, Jr., Mrs. John W. Kolmer, Mrs. Harold L. Williams, Mrs. Charles G. Smith, Mrs. William N. Gordge, Mrs. William F. Bernart, and Mrs. William A. Cook, Jr.

Family Health

A major emphasis of Family Health throughout the year will be the annual physical examination for every doctor. This is an individual undertaking for every doctor's wife. Using the physician's birthdate for an easy reminder should make this necessary job somewhat easier. It is impossible to place too much emphasis on the value of the annual physical to the physician himself and to the happiness and security of the doctor's family.

Along with the annual physical for the MD should go the annual, at least, Pap test for the doctor's wife, on her birthday. We do so much for others; let's do annual physicals and Paps for ourselves.

Jeanne Strong (Mrs. L. C., Jr.), *Chairman*

International Health

Medical Assistance Programs needs PDRs. *Physician's Desk References*, not over three years old, are sent with each shipment of sample drugs to mission hospitals abroad. Mrs. Beth Knighton at MAP says, "There is no limit to the number needed. Send them all."

Also useful to isolated overseas doctors and nurses are the cassette tapes sent (unsolicited) by many drug companies. Back-issue Audio-Digest tapes are welcome too. PDRs and cassettes should be directed to MAP, Box 50, 327 Gundersen, Wheaton, Illinois, 50187. Cassettes marked "educational materials" require minimal postage.

Cyndy Bernart
(Mrs. William F.), *Chairman*

Editorial....

Paré

IN THE HISTORY of Western medicine possibly the greatest practitioner of instinctive common sense was Ambroise Paré (1510-1590), in a sense the father of French surgery. I say in a sense only because the lessons he learned and taught, the fresh attitude which he introduced, were forgotten in the succeeding decades of bickering between the surgeons, the barber-surgeons, and the physicians. In every way his was an incredible career. His tenacity of life and his luck in an age of terrible no-quarter wars let him live to the age of eighty, bright to the last. His genius, his industry, his shrewdness in sidestepping traps set for him by others all contributed to his fame. He began as a lowly barber-surgeon, an apprentice in Paris. He lived a life of toil and derring-do and surgery in the armies of France and in Paris between wars. He became premier surgeon to several kings of France, was much loved by them all. His services were in demand by the great of the kingdom, though his gentle sympathies were with the lowly despised foot-soldier. He was interested in everything which came to his notice, from monsters of the sea to monsters from the human womb, from war injuries to syphilis, from bubonic plague to midwifery. He mixed a devoted love for his family with a shrewd business acumen. He became one of the most facile writers in the history of medicine.

He wrote in his native French. This annoyed many who hated to see the commonalty reading their secrets. He persisted and produced many tracts and handbooks useful to surgeons, plus a delightful account of his travels. He is supposed to have known no Greek and little Latin, but he seems to have mastered, or had translated for him, much of Hippocrates and Galen. His last production, his great collected *Oeuvres* is a thick folio volume with many woodcut illustrations. It saw many editions, even one in the Latin which Paré spurned. Before me is the 1634 English translation of this Latin edition. Much of the spice of the original French is said to have been lost. Perhaps so, but this book is still the most interesting reading of all the old medical texts which I have seen. In pithy English we find a long careful section on anatomy followed by detailed dissertations on many surgical and some medical conditions, frequently enlivened by actual case histories which make the huge work a mirror of Paré's times.

His most famous exploit in the field of common sense came early in his career. Fresh out of his Paris apprenticeship, he was assigned to army duty at the height of a battle. At that time gunpowder was considered to be a deadly poison and it was considered mandatory to treat gunshot wounds with boiling oil in which various condiments had been dissolved. Paré did as he was told until the oil ran out. To his horror he found that he had only a compound of rose water, egg albumen, and wine with which to dress the wounds. After a long evening of this surgical work he fell exhausted into his bunk.

But he could not sleep for worry over his poor poisoned soldiers. Early the next day he rushed to see his patients. He was amazed to find that the gently treated men were comfortable and that the others were feverish and complaining bitterly of their pain. At once he dropped the hot oil treatment. This took courage, for one did not buck tradition in those days.

Again, when doing amputations it was standard practice for the surgeon to touch the arteries with the red-hot iron to stop bleeding. Why subject the patient to such pain? Why not tie off the arteries? The silk ligature was born in the brain of Paré, to the distress of "many eminent surgeons and physicians" to whom common sense meant little and to whom change was anathema. Paré, when he knew he was right, enjoyed his battles with his critics. He often made judicious use of wit, sarcasm, and facts.

Other treatments stirred his ire. One of these was the use of powdered mummy for many conditions. Incredible as it may seem, for centuries powdered Egyptian mummy was considered a potent medicine. Since the availability of mummies was certainly limited unscrupulous persons did not hesitate to mummify and desiccate executed criminals for profit. Paré learned this and waxed quite sarcastic in his replies to his critics. He hinted that he was opposed to cannibalism.

He greatly believed in cleanliness. He was agreeable to the presence of a certain amount of laudable pus, but he liked to keep it at a minimum by cleansing wounds frequently with brandy or rosewater in wine. It is quite possible that his results were better than those of the dirty early nineteenth century. He had at his command a startling array of ingenious, almost modern, tools: bone saws large and small, tripod elevators to raise depressed skull fragments, rongeurs, parrot-beak clamps. He knew all about splints. In obstetrics he originated version and extraction which was a valuable method of delivery before the day of the forceps. It is surprising that he did not think of the latter since he did use effective hooks for the removal of dead babies and since he illustrates forceps for the removal of bladder stones which resemble the modern obstetric forceps.

But we would consider some of his ideas strange. More than once, to combat the chill of badly wounded soldiers lying in drafty barns-turned-hospital, he buried the sufferers deep in horse dung. In the light of the knowledge of his day this was an ingenious treatment for dangerous hypothermia. Piled manure does generate the "heat of decomposition". Many of these soldiers thrived. Naturally Paré did not associate horse manure with the tetanus he knew so well and which he treated with instruments or force feed. We cannot fault a mere surgeon for not recognizing the germ theory three centuries before even physicians were prepared to accept the concepts of Pasteur and Koch.

Paré's career is a long example of the value of ingenuity and the use of common sense, of keeping an open mind, and of being willing to abandon disproven old treatments. He would have eagerly accepted the germ theory, like Lister, and unlike so many medical men of the late nineteenth century.

Gordon W. Jones, M.D.

News....

Calendar of Events

National Leadership Conference—Sponsored by AMA—Marriott Motor Hotel—Chicago—January 24-26, 1975.

Alton D. Brashear Postgraduate Course in Head and Neck Anatomy—Postgraduate Course sponsored by Medical College of Virginia—Approved for 40 elective hours by American Academy of Family Physicians and Academy of General Dentistry—Department of Anatomy—Medical College of Virginia—Richmond—January 20-23, 1975.

Congress on Medical Education—Sponsored by AMA—Palmer House—Chicago—January 31-February 2, 1975.

Cancer of the Breast—A continuing education course sponsored by Southeastern Surgical Congress. Hyatt Regency Atlanta Hotel—Atlanta, Georgia—February 16, 1975.

Southeastern Surgical Congress—43rd Annual Assembly—Hyatt Regency Atlanta Hotel—Atlanta, Georgia—February 17-20, 1975.

Virginia Lung Association—Williamsburg Lodge—Williamsburg—February 17-21, 1975.

First Annual Cancer Symposium at Walt Disney World—Contemporary Resort Hotel—Lake Buena Vista, Florida—February 19-22, 1975.

Annual Meeting—American Academy of Pediatrics, Virginia Chapter—Williamsburg—February 28-March 2, 1975.

Nutrition in Mothers, Infants, and Preschool Children—A short course sponsored by Department of Nutrition, University of North Carolina—Carolina Inn—Chapel Hill—March 3-4, 1975.

Public Affairs Workshop—Sponsored by AMA-AMPAC—Washington Hilton—Washington, D. C.—March 7-9, 1975.

National Conference on Rural Health—Sponsored by American Medical Association—Hotel Roanoke—Roanoke—March 20-21, 1975.

New Medical Executive School—Sponsored by AMA/AAMSE—Sheraton-Chicago Hotel—Chicago—April 6-8, 1975.

Virginia Heart Association—Annual Meeting and Scientific Sessions—New Cavalier—Virginia Beach—May 12-13, 1975.

Annual Meeting of The Medical Society of Virginia—Hotel Roanoke—Roanoke—October 23-26, 1975.

* * * * * * * *

The Medical Society of Virginia maintains a registry of medical meetings and programs of interest to Virginia physicians. You can help by keeping us advised of any meetings scheduled in your area. This will not only help others avoid conflicts but also provide helpful information on opportunities for continuing education.

New Members.

The following were received into membership in The Medical Society of Virginia during the month of September:

Jewell Milton Barnett, M.D., Newport News
Michael Charles Beachley, M.D., Richmond
Vicente A. Castillo, M.D., Stuart
William Robert Cooper, M.D., Virginia Beach
Randall T. Curnow, M.D., Charlottesville
Robert F. Dobrsynski, M.D., Alexandria
John Joseph Etnoyer, M.D., Hampton
Newell Robert Falkinburg, M.D., Roanoke
William Martin Fogel, M.D., Richmond
Donald Richard Fowler, M.D., Staunton
Jay Stephen Goldberg, M.D., Colonial Heights
Lazer John Greenfield, M.D., Richmond
Alan Board Grindal, M.D., Richmond
Earl Hodin, M.D., McLean
Kasedul Hoq, M.D., Portsmouth
Shoichi Steven Hotta, M.D., Norfolk
James Robert Howe, M.D., Falls Church
Robert Wheary Irvin, Jr., M.D., Roanoke
Edward R. Isaacs, M.D., Richmond
Jorge Borces Joaquino, M.D., Exmore
Yves L. Lautier, M.D., McLean
Chong Wook Lee, M.D., Alexandria
Peter D. LeNard, M.D., Arlington
Jose Antonio Lengua, M.D., Urbanna
Roy Winston Lutz, M.D., Winchester
Dorsey Taylor Mahin, M.D., Richmond
Gerardo Mendez, M.D., Richmond
Lawrence Keith Monahan, M.D., Roanoke
Variathu Biswanath Pillai, M.D., Suffolk
Lawrence Stuart Pohl, M.D., Washington, D.C.
Jack Douglas Proctor, M.D., Richmond
Hugo Leon Ramirez, M.D., Charlottesville
Edward Luke Rea, M.D., Falls Church
Gilberto E. Rodriguez, M.D., Richmond
Donald George Seitz, M.D., Richmond
Lindley Theodore Smith, M.D., Richmond
Thomas J. Smith, M.D., Virginia Beach
Gene Earl Swanson, M.D., Winchester
Steven Andrew Tatar, M.D., Charlottesville
Kuldeep Teja, M.D., Charlottesville
John Edward Traynham, III, M.D., Front Royal
Stanley C. Tucker, M.D., Richmond
Winston Ueno, M.D., Alexandria
Dionisio A. Urena, M.D., Stephens City
Albert Julian Wasserman, M.D., Richmond
Charles Oscar Watlington, M.D., Richmond
William Brandon Wright, M.D., Falls Church
Harold Taylor Yates, Jr., M.D., Alexandria
Benjamin Franklin Zambrana, M.D., Richmond

New Student Members from the Medical College of Virginia are:

Kermit Bernard Ashby
Nancy Nates Allen
Donald Howard Banks
Wilson Carter Beamer
Norman Hurst Bertels, III
Brian James Caine
Thomas Joseph Carrico
G. Kristin Crosby
Steward Andrews Deekens, Jr.
Margaret Allison Dickens
Martha Rita Dorn
Thomas Irving Epperson, Jr.
Dennis Barry Forbes
Gary B. Friden
James Estes Gardiner
James J. Gehrig, Jr.
Jeffrey Paul Ginther
Martha Ann Griswold
Roberta A. Harold
William Gore Harrington
Jeffrey David Harrison
Frederick Peter Harry
Timothy David Helton
John Joseph Hennessey, IV
Lee Janet Hornstein
George Samuel Hughes, Jr.
William F. Hughes
Thomas Lloyd Kirtley, Jr.
G. Steven Kooshian
John Edward Lee
Sallie Lucille Lucas
Michael Mauk
Angela Myra Mercer
John C. Miller

Jose Enrique Misas
James LeRoy Morgan, Jr.
J. Stuart Morgan
Philip Newman
Bradley William Nicholson
Othella Theresa Owens
Harold Ingram Palevsky
Clarence Edward Pearson, Jr.
Stephen Lee Phillips
Robert Kerry Pistner
Eugene Jerome Pope, Jr.
Mark Jacob Rosenberg
Michael Seth Schwartzman
Michael Paul Taylor
David Immanuel Thickman
Hoa D. Tran
Neshon Michael Vranian
Beverly Gail Wheeler
Mark Ellis Whitten
Alison Wichman
James Eldridge Wilberger, Jr.
James Bryston Winegar
George Wong

Dr. Susan J. Mellette,

Richmond, has received the Virginia Cancer Society's J. Shelton Horsley Memorial Award. The award is presented for the most outstanding contribution to the control of cancer in Virginia during the preceding year. Dr. Mellette is associate professor of internal medicine at the Medical College of Virginia and a specialist in the treatment of cancer with drugs.

Dr. John B. Catlett,

Richmond, has been installed as president of the Southeastern Allergy Association. The meeting was held in Orlando, Florida.

Professorships at the University of Virginia.

Four professorships in the School of Medicine have been announced as follows: Dr. J. Shelton Horsley, III, has been named to the American Cancer Society Professorship in Surgery which is a newly established position. Dr. Warren G. Stamp has been named Alfred R. Shands Jr. Professor of Orthopedics. Dr. Robert M. Epstein was elected Alumni Professor of Anesthesiology. Dr. Wilton H. Bunch was elected Helen B. and Donald C. Barnes Professor of Orthopedics.

Dr. Fitzhugh Mayo,

Richmond, has been awarded the Thomas W. Johnson Award for outstanding contribution to family practice education by the American Academy of Family Practice. The presentation was made at the annual Congress of Delegates in Los Angeles in October. Dr. Mayo is professor and chairman of the Department of Family Practice at the Medical College of Virginia.

Dr. Raymond L. Schwartz,

Recently clinical professor of medicine at Georgetown University Medical College and over 15 years earlier chief of medicine and chief of staff at Arlington Hospital, Arlington, has accepted an appointment with the Virginia State Department of Health. He will serve as regional medical director in Health Care Delivery.

Dr. William M. Bickers,

Richmond, has received the Distinguished Order of the Cedars of the Republic of Lebanon. The honor was conferred for distinguished contributions to the medical education of the Arab world and surgical services to suffering women of all social stations in the Arab Peninsula. He was professor and chairman of the Department of Obstetrics and Gynecology of the American University of Beirut from 1960 to 1973.

AMA Honors Record-breaking Member.

The American Medical Association has honored the physician who last month became its 168,215th member, thus giving it the highest membership total in its history. The record-breaking member was Dr. Edward L. Lilly, Norfolk. The occasion called for some festivities and Dr. and Mrs. Lilly were guests at a small dinner in their honor in Norfolk. Dr.

Richard E. Palmer, chairman of the Board of Trustees, presided at the dinner and presented an award to Dr. Lilly at a meeting of the Norfolk County Medical Society following the dinner.

Postgraduate Course in Nuclear Medicine.

The Eleventh Annual Postgraduate Course sponsored by the Department of Radiology, Medical College of Virginia, will be held in Williamsburg, February 24-28. The course will provide up-dated information on a wide variety of topics in clinical nuclear medicine. It is designed for the practicing radiologists and the interested allied physicians in other specialties. The program is accredited by the American Medical Association.

For further information, contact Gary G. Ghahremani, M.D., MCV Station, P. O. Box 728, Richmond, Virginia 23298.

Obituary . . . .

Dr. Chapman.

On June 1, 1974, at the age of 76, Dr. Douglas Gordon Chapman, died in his home in Richmond. He is survived by his wife, a son, a daughter and three grandchildren.

Dr. Chapman, who showed special interest in cardiovascular and renal disease, was a founder and past president of the Richmond Area Heart Association. He was also a former president of the Richmond Academy of Medicine, a member of the American Medical Association, the Southern Medical Association, the American Heart Association, and for forty-eight years, The Medical Society of Virginia. He was a Diplomate of the American Board of Internal Medicine, and, in 1955, was elected a Fellow of the American College of Physicians. He was a member of Phi Rho Sigma and Alpha Omega Alpha.

Dr. Chapman, as assistant Clinical Professor of Medicine at the Medical College of Virginia, showed his interest in teaching as he conducted for many years an elective preceptorship for junior and senior students, many of whom have had distinguished careers in the practice and teaching of medicine. One of his former students particularly recalls his personal dedication to his patients and his effectiveness as a teacher with accurate clinical judgment, demonstrating the subtleties of the doctor-patient relationship, particularly as related to the art of medicine.

Following his graduation from Roanoke College in 1920, where he was a backfield star in football, he attended the Medical College of Virginia and graduated in the class of 1925. In addition to his training in Internal Medicine, he showed an early interest in pathology, which he studied at Mayo Clinic under Drs. McCarty and Broders. After a brief period at St. Luke's Hospital with Dr. Garnett Nelson, he came, in 1929, to St. Elizabeth's Hospital in association with Dr. John Shelton Horsley, Sr., where, as Chief of Medicine, he continued his practice for more than a third of a century.

Having been born and reared at Woodstock, in the Valley of Virginia, he developed an early and lasting interest in matters pertaining to the War Between the States. Upon building his home in Windsor Farms he installed locks formerly used in an old Valley home, where Stonewall Jackson stayed during the Valley Campaign. He also incorporated a cannon ball in the side porch of his home. The library was panelled with walnut from trees grown on his land in the Valley. He was interested in, and collected, Indian artifacts, and was adept in making flint arrowheads. His azalea garden behind his home, with its hundreds of various colored plants, became a showplace that attracted thousands of visitors during the spring season and Garden Week.

Dr. Chapman suffered a severe myocardial infarction in 1947, but, in spite of several intervening episodes, he continued in active practice until his retirement in 1962. His terminal illness involved cerebral thrombosis with hemiplegia. Dr. Chapman will continue to live on in the memory of his patients and colleagues, especially those of us who were privileged to know him and who worked with him.

The committee requests that a copy of the resolution be spread upon the minutes of the Richmond Academy of Medicine, and that a copy be sent to The Medical Society of Virginia and to the members of his family.

Harry J. Warthen, M.D.
Emmett C. Mathews, M.D.
Thomas D. McCahill, M.D.
Elmer S. Robertson, M.D., *Chairman*

Dr. Grannum.

Eustace Stanley Grannum was born on June 9, 1907, in Georgetown, Guyanna, South America, where he spent his early childhood and received his elementary education. He graduated from City College of New York, Howard University, Washington, D.C., and Boston College of Physicians and Surgeons wherefrom he earned his degree of Doctor of Medicine in 1940.

He came to Newport News after holding administrative positions at Norfolk Community Hospital and Good Samaritan-Waverly Hospital in Columbia, South Carolina. His longest continuous service was as the dedicated, sacrificial, faithful administrator of the often storm-tossed Whittaker Memorial Hospital in Newport News, Virginia from 1944 until his transition from mortality to immortality on July 14, 1974.

During his years as administrator, Whittaker Memorial Hospital was continuously approved, first by the College of Physicians and Surgeons and later by the Joint Commission on Accreditation of Hospitals.

The health care delivered by this institution has been consistently on par with institutions of comparable size and facilities, with quality and efficiency being requirements demanded by Dr. Grannum during his tenure.

Eustace Stanley Grannum was a member of the Board of Directors of Virginia Council of Social Welfare, Board of Directors of the Virginia Hospital Association, American Academy of Political and Social Science, American Hospital Association, American Public Health Association, International Hospital Federation of London, England, and the International Union of Health Education of Geneva, Switzerland.

He also held Fellowships with the American College of Hospital Administrators, American Geriatrics Society and the Royal Society of Health in London, England.

Dr. Grannum's activities were not confined to the medical profession as he held positions in many lay capacities and with civic organizations, having been a past member of the Newport News School Board, on the Board of Directors of the Peninsula Chamber of Commerce and Peninsula Nature Museum and Planetarium, the Executive Board of the Episcopal Diocese of Southern Virginia, and a dedicated member of long standing of Saint Augustine's Episcopal Church of Newport News.

The Virginia Chamber of Commerce and the National Association for the Advancement of Colored People were other civic organizations demanding his participation. He was also a member of the American, National and Pan-American Medical Associations, the Newport News, Old Dominion and Peninsula Medical Societies, the Medical Society of Virginia and Virginia Association of Professions.

Dr. Grannum was the recipient of numerous awards some of which included the Legion of Honor Membership of Chapel of Four Chaplains in 1966, a Distinguished Achievement Award from Two Thousand Men of Achievement in 1968 and the Alpha Award of Merit for service in Hospital Administration from Alpha Phi Alpha in 1955.

In all of his positions and capacities, Eustace Stanley Grannum exemplified humility and persuasive power to stimulate and inspire those with whom he came in contact and stood unfailingly ready to extend assistance and encouragement with no thought of personal compensation. His dignity and fineness of person, his intellect and character endeared him to all of those who knew him.

When Stanley felt the sting of long years of service making an imprint on his health, he recruited a young, capable assistant in his capacity as hospital administrator and groomed him for the task of assuming the helm that he knew he was soon to relinquish at least to retirement, not fully knowing the gravity of his failing health or how rapidly time was to change to eternity.

Dr. Grannum's immediate survivors include his wife and a daughter.

Whereas: With the irreparable loss upon the passing of this faithful servant to the medical profession, the Newport News Medical Society wishes to register its deep sorrow at the death of Dr. Eustace Stanley Grannum.

Whereas: The Peninsula Community at large having lost a dedicated citizen and conscientious worker, therefore

Be it resolved, That a copy of this resolution be spread upon the minutes of the Newport News Medical Society, and

Be it further resolved, That copies of this Resolution be sent to his family and to each local hospital and medical organization with which he was affiliated.

Thomas W. Payne, M.D., *President*
Roland G. Garrett, M.D., *Secretary*
Newport News Medical Society

VIRGINIA MEDICAL MONTHLY

Official Publication of

The Medical Society of Virginia

• • • • •

INDEX TO VOLUME CI

• • • • •

January, 1974 - December, 1974

Inclusive

INDEX TO VOLUME CI

January, 1974-December, 1974, Inclusive

January	pages 1- 84	May	pages 345-426	September	pages 693- 826
February	pages 85-166	June	pages 427-512	October	pages 827- 916
March	pages 167-250	July	pages 513-600	November	pages 917-1014
April	pages 251-344	August	pages 601-692	December	pages 1015-1104

AUTHOR INDEX

Al-Abdulla, Hamid M., 373
Allerton, William S., 876
Allison, Marvin J., 202, 975
Argueta, Angel E., 39
Arnold, John B., 132

Beard, E. Jerry, 121
Bechamps, Gerald J., 114
Berent, Stanley, 856
Beyer, James C., 43
Borges, Albert F., 618
Brodie, Edmund M., 17, 181
Bruml, H., 979

Campbell, H. James, 640
Carr, Corinne H., 366
Carroll, William, Jr., 672
Carron, Harold, 22
Chadduck, William M., 196
Chandler, James G., 559
Cimmino, Christian V., 228, 890, 1050
Clairmont, A. A., 181
Clark, Margie B., 573
Cook, C. Harrie, 617, 625
Copen, L., 979
Coppola, A. R., 199, 854
Crampton, Richard S., 100, 126
Crouch, William M., 129

Dalton, Harry P., 202, 975
Davis, Charles E., Jr., 15
Derdeyn, Andre P., 32
DeVocht, Ludovic J., 859
Dierker, Leroy J., Jr., 25
Dobranski, Andrew, 625
Dollette, Rodolfo E., 39
Driver, Evelyn, 121

Edmunds, Meade C., 849
Elmore, Stanley M., 377
Enos, William F., 43
Escobar, Mario R., 202, 975

Farrell, Walter J., 632
Ferry, Darwin J., 274
Fitzer, P. M., 283, 948
Fitchett, Claiborne W., 101

Godwin, Mills E., Jr., 532
Golden, Gerald T., 661, 863, 958
Gorsuch, Thomas L., 121
Graham, Samuel D., Jr., 958
Greer, Kenneth E., 193
Gwathmey, Owen, 803

Hagood, W. J., Jr., 529
Harbin, William P., 1050
Harris, W. H., Jr., 1034
Harris, W. O., Jr., 283
Horsley, J. Shelton, III, 661
Houck, Peter W., 721
Howard, James S., III, 1043
Hudson, Gail M., 859
Hunter, James G., Jr., 1054
Hutt, James B., Jr., 445

Innes, Arthur J., 278
Irby, Robert, 362
Irish, Thomas J., Jr., 39

Jackson, Greer, 742
James, A. Everette, Jr., 640
James, Charles M., 377
Johnson, Burton A., 640
Jones, Gordon W., 323, 1081

Kannan, Jacquelyn P., 189
Kannan, Michael M., 189
Kay, Saul, 181
Kight, John R., 844
King, E. Richard, 17, 121
King, James R., 545
King, John N., 39
Kleinholz, Emil J., Jr., 939, 951
Komp, Diane, 132
Kopp, J. E., 283
Kuykendall, Harry C., 715

Lawrence, Walter, Jr., 108, 292
LeQuesne, L. P., 718
Levey, Myron S., 640
Levin, Irving, 1068
Limber, Gerald K., 17
Lineberger, A. S., 625
Lopez-Rasi, Alfredo, 849

Mackintosh, Alan, 629
Maddox, Joseph E., 25
Marcus, Howard, 126
Martin, John A., 1036
Martinez, Edgardo, 17
Matthews, Emmett C., Jr., 299
McCausland, Alexander, 443
McGovern, Francis H., 988
McKeever, V. Joy, 856
McNeer, Keith W., 273, 874
Mensch, Joseph S., 377
Moll, Wilhelm, 29
Montero, Juan M., II, 39
Moran, John L., 25
Morgan, Judyth A., 465
Mullinax, P. Franklin, 299
Myles, J. T., 283

Nagy, Robert, 383
Newby, Norwyn, 274
Nichols, Catherine, 121
Nolan, Stanton P., 863

Old, Levi, Jr., 545
Oller, Norma S., 846
Owen, Duncan S., Jr., 299
Owen, John A., Jr., 403

Page, M. Jane, 179
Papachristou, Dimitri, 108
Payne, Robert L., Jr., 101
Peach, W. F., Jr., 283
Pennington, M. A., 361
Perez, Eugene Reyes, 750, 1031
Poretz, Donald M., 653
Prybil, Lawrence, 458
Pugh, H. Lamont, 495

Raper, A. Jarrell, 942, 945
Reid, Robert A., 750
Reina, Abdon, 955
Rinaldi, I., 283
Rittelmeyer, Louis F., 629
Robertson, William A., 803
Rochmis, Paul G., 645
Romano, Michele, 951
Rusk, Henry, 625

Saul, Patton B., 465
Schachner, Stephen H., 638
Shapo, Marshall, 1059
Shaw, Anthony, 366, 1059
Simpson, John, 458
Smith, G. R., Jr., 803
Spencer, Fred J., 61
Stanton, Larry W., 632
Stevens, Dolores, 132
Stokes, T. Lane, 545
Switz, Ronald M., 185

Tambe, Alan A., 373
Teates, Charles D., 1054
Terz, Jose J., 108, 292
Toxopeus, Margaret, 452
Troxel, George, 452
Tucker, Weir M., 449

Vaden, Edwin B., 132
Van Heerden, Jonathan A., 114, 452

Warthen, Harry J., 62, 150, 229, 324, 405, 497, 535, 678, 805, 892, 991
Weyl, W. L., 588
Wiecking, David D., 393, 577
Wilhelm, Morton C., 465
Williams, David C., 179
Wombolt, Duane G., 846
Wood, James, 458

Yaffe, Ronald H., 874

Zimmerman, Henry A., 373
Zolik, Edwin S., 1068

Adrenal and ovarian failure, Primary, 638
Adrenalectomy for metastatic carcinoma of the breast, 114
Androgenic steroids in anemia of chronic renal failure, 846
Anemia of chronic renal failure, Androgenic steroids in, 846
Anesthesiology, Suggestions in, 22
Antimicrobial susceptibility of common bacterial species, 202, 975
Aortic arch and brachiocephalic vessels, The advantages of biplane radiography in angiography of the, 632
Arteriography and small Q-waves, Correlation between cine-coronary, 373
Atkins' diet revolution, Dr., 383
Australian antigen (Au_1) hepatitis associated antigen (HAA) and HB Ag indicate ignorance or progress, Do the terms, 185

Bacterial species, Antimicrobial susceptibility of common, 202
Bile vomiting with alkaline esophagitis after gastrectomy, 129
Body for scientific study, Donation of the, 393
Boerhaave's syndrome, 452, 803
Brachiocephalic vessels, The advantages of biplane radiography in angiography of the aortic arch and, 632
Breast, Adrenalectomy for metastatic carcinoma of the, 114

Cabell, Two letters by Dr. James Lawrence, 29
Cancer control, Uterine; 859; Soft part sarcomas in adults, 292; Postmastectomy lymphedema, 465; Childhood leukemias, 132; Clinical evaluation of the assay for carcinoembryonic antigen (CEA), 108; Virginia uterine—detection campaign, 977; Bone scanning in clinical oncology, 1054
Carcinoma of the anus, Epidermoid, 661; Adrenalectomy for metastatic — — — breast, 114; Late osseous metastasis from — — — cervix, 25; — — — ovary, radiation therapy experience, 17
Carcinoembryonic antigen (CEA), Clinical evaluation of the assay for, 108
Cervical spine and nerve root pain, Diseases of the, 199
Cervix, Late osseous metastasis from carcinoma of the, 25
Child abuse, A team approach to, 366; Education and the gifted —, 189
Children and death, 573
Cine-coronary arteriography and small Q-wave, Correlation between, 373
Cirrhosis, Acute varicoal bleeding in patients with alcoholic, 559
Cisternography and ventriculography, Isotope, 283
Coronary care in Waynesboro, Virginia, Mobile prehospital, 121; Rural mobile — —, 126

Death and children, 573
Diet revolution, Dr. Atkins', 383
Doctor's dilemma, The, 718
Drug-induced lupus erythematosus, 299

Eastern State: America's oldest public hospital, 1043
Edema, Idiopathic, 961

Editorials
All work and no play, 62
AMA speaks out, The, 230
AMA takes the offensive, The, 324
American medicine: a paradox, 1031
Books in the bathroom, 61
Cardiac care in the Commonwealth, Pre-hospital emergency, 97
Coins, The other side of two, 806
Common sense, 323
Community hospital's governing board, The, 228
Enough, 715
Fairfax Hospital issue, 617, 678
FDA reversed, The, 15
HEW is at it again, 229
Hill, William R., M.D., President, 991
Hour is late, The, 588
Infections, The problem of hospital acquired, 844
Intercepted letter, An, 529
Internship crisis in Virginia, The, 403
"Jennie" and British medicine, 150
Kennedy and medicine, Senator, 405
Optometrists, The aggressive, 273
Paré, 1081
Printing costs and the state medical journals, 805
PSRO—what it means to me, 443
Pulmonary rehabilitation, a hope for the breathless, 939
Radiology of the lung, Modern, 890
Rhodes scholar, More about the, 497
Rhodes Scholars—1904-1974, 495
Spanish flux, 1034
Virginia disability determination division, The, 179
Watergate aftermaths, 892
Words, Just a few, 361

Education and the gifted child, 189
Electrocardiographic monitoring in acute respiratory failure, Continuous, 951
Emergency department utilization, An approach to studying, 458; Law affecting — medical services and rescue squads, 577
Encephalopathy, Hypertensive, 470
Epidermoid tumor simulating lumbar disc disease, 196
Esophagitis after gastrectomy, Bile vomiting with alkaline, 129

Femoral neuropathy, 854

Gallbladder, Agenesis of the, 849
Gastrectomy, Bile vomiting with alkaline esophagitis after, 129
Giant mixed tumor of the parotid, 39
Gilles de la Tourette syndrome, 672
Gout problems, Eleven, 645
Growing skull fractures syndrome, 955

Head injury, Minor, 274
Health in Virginia during the year 1973, A summary of, 315
Hemoglobinopathies, Diagnosis of, 665
Hepatitis associated antigen (HAA) and HbAg indicate ignorance or progress, Do the terms Australia Antigen (Au_1), 185
HMS's, PSRO, NIH—the doctors' dilemma, 362

Hodgkin's disease, 181, 549
Hospital, Eastern State: America's oldest public, 1043
Hyperparathyroidism, Surgical treatment of, 101
Hypertension, 207; Practical office management of chronic—, 945
Hypertensive workup, What is a good? Who needs it? 942

Immunization action month—October, 875
Influenza, 45
Internship crisis in Virginia, The, 803
Isotope cisternography and ventriculography, 282

Johnson, The SS Arctic and Professor, 535

Knee disability, A method for evaluation of, 377

Lead poisoning detection, 1066
Leukemia, Childhood, 132
Lumbar disc disease, Epidermoid tumor simulating, 196
Lupus erythematosus, Drug-induced, 299
Lymphedema, Post-mastectomy, 465
Medical Society of Virginia: Minutes of Council, 216, 486, 882, 1074; Special Session of House of, Delegates, 581; Preliminary program, 760; Delegates, 769; Committee reports, 772; Presidential address, 1036
Medicine in Virginia as the Governor sees it, 532
Meningitis and meningococcemia, Meningococcal, 383
Meningococcemia, Meningococcal meningitis and, 386
Mental hospitals, Involuntary admission to state, 876; An analysis of the patient population in a small state-run — hospital, 979
Mentally ill patients, Preventive maintenance for, 742
Methadone, Pulmonary edema caused by, 640
Midwifery, Practice of, 140
Mobile prehospital coronary care in Waynesboro, Virginia, 121; Rural —coronary care, 126
Mycetoma, Nocardial, 193

NBT test in bacterial and non-bacterial pharyngitis, The, 653
Nephrolithiasis, 727
Nerve root pain, Disease of the cervical spine and, 199
Newborn transport in Virginia, 721; Legal, moral and ethical dilemmas in the—nursery, 1059
NHI, PSRO, HMO's—the doctor's dilemma, 362
Nocardial mycetoma, 193
Nosocomial infection surveillance and control in Virginia, 740
Nurse practitioner in Virginia, The family, 750
Nurses' role through the physician's eye, The, 449

Obituary

Joseph E. Anderson, Jr., 68
Sidney Elsom Bray, 592
Robert Carl Bunts, 810
Sheldon David Carey, 410
Joseph Willis Carney, 69
George Benjamin Carter, 997
Douglas Gordon Chapman, 592, 1086
John Wyatt Davis, Jr., 592, 683
John Huit Dellinger, 896
John P. Eastham, 70
John Arthur Gallant, 68
William Richard Garcia, Sr., 77
Lula Woods Garst, 410
Eustace Stanley Grannum, 1087
James Romond Grinels, 160
Allen Tupper Hawthorne, 810, 898
Martin Abraham Hoffman, 810
Ira Thomas Hornbarger, 160, 330
Holcombe Harris Hurt, 683, 997
Kasper Kaufman, 235
Brooke Baylor Mallory, 996
Carl Wise Meador, Jr., 69
Chimer Davis Moore, 330
James William Murphy, 70
Victor Page Owen, 898
Joseph Forrest Phillips, 683
Joseph Anthony Provenzano, 997
Jean Florence Henry Rooney, 810
Simon Harry Rosenthal, 236
Samuel Gilmore Saunders, 683
William Porter Sellers, III, 997
Henry Clay Smith, 235
Jerome F. Smith, 70
Caldwell Jackson Stuart, 898
Paige Earl Thornhill, 502
Edwin Darracott Vaughan, 160
William Wallace Zimmerman, III, 998

Operating room assistants program, 545
Optometrist, The aggressive, 874
Osteomyelitis, Radioisotope scintigraphy in, 625
Ovarian failure, Primary adrenal and, 638
Ovary, Carcinoma of the: radiation therapy experience, 17

Parotid benign giant mixed tumor of forty-two years duration with malignant transformation, 39
Patient care, Problem-oriented approach to, 856
Personality development and — disorders with emphasis on the antisocial —, 32
Pharyngitis, The NBT test in bacterial and non-bacterial, 653
Pneumothorax, Spontaneous, 278
Presidential address, 1036
PSRO must be repealed, 445; —, NHI, HMO's—the doctor's dilemma, 362
Psychiatric education in a family practice residency, 629
Pulmonary edema caused by methadone, 540; The causes, prevention and treatment of post-traumatic — insufficiency, 863

Q-wave, Correlation between cinecoronary arteriography and small, 373

Radiation therapy experience—carcinoma of the ovary, 17
Radioiodine uptake in Tidewater Virginia, New normal ranges for the, 948
Radiographic innominate lines of the scapular spine, The, 1050
Radiography in angiography of the aortic arch and brachiocephalic vessels, The advantages of biplane, 632
Radioisotope scintigraphy in osteomyelitis, 625
Rape investigation form, A standard, 43
Renal failure, Androgenic steroids in anemia of chronic, 846
Rescue squads, Law affecting emergency medical services and, 577

Sarcomas in adults, Soft part, 292
SS Arctic and Professor Johnson, The, 535
Scanning in clinical oncology, Bone, 1054
Schizophrenics, chemotherapy and coordinated community care in reducing rehospitalization of, 1068
Skull fractures syndrome, Growing, 955

Societies

Accomack County Medical Society, 326
Alexandria Medical Society, 153
Alleghany-Bath County Medical Society, 326
Arlington County Medical Society, 326
Bedford County Medical Society, 500
Buchanan-Dickenson Counties Medical Society, 408
Danville-Pittsylvania Academy of Medicine, 65
Fauquier County Medical Society, 408
Franklin County Medical Society, 408
Fredericksburg Medical Society, 232
Hampton Medical Society, 681
Lynchburg Academy of Medicine, 681
Medical College of Virginia Student Society, 408
Newport News Medical Society, 153
Norfolk County Medical Society, 895
Northampton County Medical Society, 326
Northern Neck Medical Society, 326
Portsmouth Academy of Medicine, 895
Roanoke Academy of Medicine, 995
Rockingham County Medical Society, 153
Southside Virginia Medical Society, 233
Southwestern Virginia Medical Society, 995
Stuart Medical Society, 233
Tazewell County Medical Society, 233
Tri-County Medical Society, 153
Virginia Beach Medical Society, 326

Splenic abscess, 958

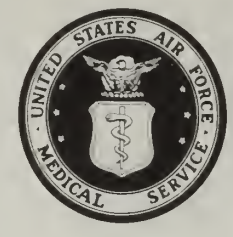
Tumor of forty-two years duration with malignant transformation, Parotid benign giant mixed, 39

Uterine cancer control—a project for all physicians, 859

Ventriculography, Isotope cisternography and, 283
Virginia Professional Standards Review Foundation charter, 756

Z-plasties, The five single, 618

An Open Letter to Medical Professionals



Many physicians are seeking relief from the ever increasing pressures of medical practice within the private health care sector. The United States Air Force Medical Service is offering an alternative form of medical practice to all physicians 58 years of age or younger. Frankly, we are proud of the quality health care the Air Force Medical Service provides and would briefly take this opportunity to present you a challenge to service.

The Air Force physician practices medicine in a collective endeavor with the entire gamut of medical specialties and the finest trained allied health care professionals available. All United States Air Force Hospitals are accredited by the Joint Commission and are equipped with the finest medical instrumentation available. The very finest health care is provided to every patient without regard to the patient's ability to pay. The professional challenges of medical practice and the medical education opportunities within the Air Force Medical Service are unlimited; however, the Air Force physician normally has more time for leisure, travel, family and personal development in comparison to his civilian counterpart. The liberal fringe benefits made available to the Air Force physician provide for a secure, predictable and satisfying life style; e.g., 30 day paid vacation annually, advancement, travel, medical education, professional pay and recreational opportunities.

Your time is very valuable and thus the brevity of this informational offering. However, you owe it to yourself to consider this alternative medical practice. Positions are available in primary health care delivery, all major medical specialties, Hospital Directorships and medical research. Assignments can be arranged for two, three or four years. Initial appointment can range up to Colonel based on education and experience. Assignments to a specific Air Force Hospital may be arranged within the United States or overseas.

For further information call or write:

The Air Force Medical Personnel Counsellor
421 North Howard Street
Baltimore, Md. 21201
Area Code 301-385-2858

JOHNSTON-WILLIS HOSPITAL

RICHMOND, VIRGINIA

A MODERN GENERAL HOSPITAL
PRIVATELY MANAGED
SITUATED IN THE QUIET OF THE
WEST END RESIDENTIAL SECTION

Pulaski

Home For Adults

★ Newly remodeled and decorated
★ Private & semi-private rooms
★ Assistant on duty 24 hours a day
★ Medical facilities near by
★ Reasonable rates, $250 & up.

Write or phone for further information: P.O. Box 938, Pulaski, Va. 24301 or phone 980-2200.

Russ Penner,
Business Manager

BAYBERRY PSYCHIATRIC HOSPITAL

HAMPTON, VIRGINIA

Bayberry is a 125 bed private hospital which offers a wide range of inpatient, day care, outpatient, and consultative services, as well as treatment programs for adolescents, children, and alcoholics.

TREATMENT

After a comprehensive medical and psychiatric evaluation, each patient receives an individualized treatment program and schedule of activity therapies. Treatment may include individual therapy, group therapy, psychodrama, chemotherapy, electroconvulsive or insulin treatment.

EDUCATION

A regular school curriculum is followed and academic credit is given. The Hampton Roads Reading Center is located within the hospital and provides special instruction for children with dyslexia and other learning problems.

REHABILITATION

Rehabilitation services include individual counseling, special education, and job training programs.

ACCREDITATION

Accredited by the Joint Commission on Accreditation of Hospitals, approved for Medicare, member of the American Hospital Association, and licensed by the State Department of Hospitals and Mental Hygiene.

WENDELL J. PILE, M.D.
Medical Director

HOWARD L. COX, M.D. BASIL E. ROEBUCK, M.D. JONATHAN G. SOLOMON, M.D., LTD.

BROCHURE SENT ON REQUEST
Contact: Medical Director, 530 E. Queen Street, Hampton, Va. 23369
Telephone (804) 722-2504

STUART CIRCLE HOSPITAL

413-21 STUART CIRCLE RICHMOND, VIRGINIA

Medicine:
MANFRED CALL, III, M.D.
ALEXANDER G. BROWN, III, M.D.
JOHN D. CALL, M.D.
WYNDHAM B. BLANTON, JR., M.D.
FRANK M. BLANTON, M.D.
WILLIAM W. MARTIN, JR., M.D.
JAMES R. WICKHAM, M.D.
SNOWDEN C. HALL, III, M.D.

Obstetrics and Gynecology:
SPOTSWOOD ROBINS, M.D.
DAVID C. FORREST, M.D.
JOSEPH C. PARKER, M.D.
WILLIAM M. OPPENHIMER, M.D.

Orthopedics:
BEVERLEY B. CLARY, M.D.
JAMES B. DALTON, JR., M.D.
FRANKLIN P. WATKINS, M.D.

Pediatrics:
THOMAS P. OVERTON, M.D.
EDWARD J. WILEY, M.D.

Roentgenology and Radiology:
HUNTER B. FRISCHKORN, JR., M.D.
WILLIAM C. BARR, M.D.
JOHN E. REED, M.D.

Anesthesiology:
WILLIAM B. MONCURE, M.D.
HETH OWEN, JR., M.D.

Surgery:
RICHARD A. MICHAUX, M.D.
CARRINGTON WILLIAMS, JR., M.D.
ARMISTEAD M. WILLIAMS, M.D.
JAMES R. DARDEN, JR., M.D.
WYATT S. BEAZLEY, III, M.D.

Urological Surgery:
FRANK POLE, M.D.
HARRY S. ROWLAND, JR., M.D.

Plastic Surgery:
HUNTER S. JACKSON, M.D.

Ophthalmology, Otolaryngology:
RICHARD W. DODD, M.D.
J. WARREN MONTAGUE, M.D.

Pathology:
SUNG C. PARK, M.D.

Physical Therapy:
WILLIAM J. COWAN, R.P.T.

Administrator:
KENNETH M. HOLT

NOW AVAILABLE !

Exclusively For Children and Adolescents-- A new, completely modern 66-bed hospital is now open for patient referrals

Richmond Times-Dispatch
Sunday, July 15, 1973

New Hospital Planned

Plans to build a 66-bed hospital building and to renovate existing facilities have been announced by the Commonwealth Psychiatric Center here.

Work on the new hospital, on the center's grounds at 3001 Fifth Ave., is scheduled to start within a few weeks. Completion of the project is expected in late 1974.

Dr. William M. Lordi, director of the center, said the cost of the project, including developmental costs, renovation, site work and the actual construction, will be more than $1 million.

Lordi said work on renovating the present facilities has already started.

He said three buildings—the Lor-Berg Family Guidance Clinic, Janus Hall and Jacob Silverburg Academy—are to be improved. The renovation will include interior improvements throughout all three, modernization of kitchen and dining rooms and installation of a gym, a workshop and an activity room.

The new hospital building will be a two-story structure with 33 semi private rooms, six lounges, seven offices for doctors, an examining room, two main nursing stations and a complete dining room.

Plans for the expansion have been approved by the Capital Area Comprehensive Health Planning Council, Lordi said. The council is the official health planning authority in the Richmond area.

The expansion is being made to meet a shortage of child and adolescent mental health programs in the Richmond area, Lordi said

Currently the center has an 18-bed hospital facility.

Lordi said adolescent admissions to mental health centers have almost doubled in the United States in the last 10 years.

Recent surveys have indicated that 10 per cent of all school aged children are in need of psychiatric help Lordi said. He said half of these were serious enough to require hospital care.

The Commonwealth Psychiatric Center is the only one in Virginia devoted almost entirely to child and adolescent mental problems. The center primarily handles children aged 5 to 18, but also cares for adults as outpatients.

Architects for the new hospital building are Lockman Associates of Washington.

■ Work has just been completed on this new hospital, specifically designed for the treatment of the emotionally disturbed. In addition to the hospital itself, the Center is moving ahead with construction of a gymnasium and swimming pool to provide its patients with the very best of private institutional facilities in the Mid-Atlantic Region.

■ Four full-time child psychiatrists and a staff of experienced psychologists, psychiatric nurses, psychiatric social workers, therapists and other specialists offer a wide range of treatment modalities. A fully-accredited school program features small classes structured to meet the needs of the individual.

COMMONWEALTH PSYCHIATRIC CENTER

3001 Fifth Avenue
Richmond, Virginia 23222

Telephone (804) 329-4392

Brochure on Request

ST. LUKE'S HOSPITAL

Established 1882
Hunter H. McGuire, M.D.

McGUIRE CLINIC, Inc.

Established 1923
Stuart McGuire, M.D.

1000 West Grace Street
Richmond, Virginia

General Surgery & Gynecology
Joseph W. Coxe, III, M.D.
H. Fairfax Conquest, M.D.
Gilbert H. Bryson, M.D.
William M. Crouch, M.D.

Anesthesiology
Beverley Jones, M.D.

Physical Therapy
Elizabeth L. Watson, R.P.T.

Internal Medicine
John P. Lynch, M.D.
John B. Catlett, M.D.
Robert W. Bedinger, M.D.
David L. Litchfield, M.D.
Burness F. Ansell, Jr., M.D.
W. Wayne Key, Jr., M.D.
Randolph M. Halloran, M.D.
Hilton R. Almond, M.D.
James A. Repass, M.D.

Radiology
Henry S. Spencer, M.D.
Donald P. King, M.D.

Isotopes
David L. Litchfield, M.D.

Pathology
Hubert R. White, Jr., M.D.

Hospital Administrator
Gerald J. LaGesse

Director of Nurses—St. Luke's Hospital
Ann M. Urbine, R.N.

School of Nursing
Ann M. Urbine, R.N., Director
Joan B. Hovis, R.N., Dir. of Ed.
Elizabeth H. Ellett, R.N., Instructor

Clinic Manager
S. Taylor Ware, Jr.

Director of Nurses—McGuire Clinic, Inc.
Mary E. Simmons, R.N.

Westbrook

Psychiatric Hospital, Inc.

Richmond, Virginia

FOUNDED 1911

PSYCHIATRY

REX BLANKINSHIP, M.D.
Chairman, Advisory Group

JOHN R. SAUNDERS, M.D.
Medical Director

THOMAS F. COATES, JR., M.D.
Assistant Medical Director

OWEN W. BRODIE, M.D.
Associate in Psychiatry

M. M. VITOLS, M.D.
Associate in Psychiatry

WESLEY E. McENTIRE, M.D.
Associate in Psychiatry

BOBBY W. NELSON, M.D.
Associate in Psychiatry

NEUROLOGY

GERALD W. ATKINSON, M.D.
Associate in Neurology

HUGH HOWELL, M.D.
Associate in Neurology

CHILD PSYCHIATRY

GILBERT SILVERMAN, M.D.
Associate in Child Psychiatry

ADMINISTRATION

A. B. CAMPBELL, JR.
Administrator

SAINT ALBANS PSYCHIATRIC HOSPITAL

RADFORD, VIRGINIA 24141

703-639-2481

A fully accredited private psychiatric hospital for the treatment of all major psychiatric illnesses including alcoholism and drug abuse problems of adolescents and adults.

Morgan E. Scott, M.D.
President of the Medical Staff

George K. White
Administrator

TUCKER HOSPITAL Inc.

212 West Franklin Street
Richmond, Virginia

A private hospital for diagnosis and treatment of psychiatric and neurological disorders. Hospital and out-patient services.

James Asa Shield, M.D.
George S. Fultz, Jr., M.D.
Catherine T. Ray, M.D.

Weir M. Tucker, M.D.
James Asa Shield, Jr., M.D.

Tidewater Psychiatric Institute

1701 Will-O-Wisp Drive
Virginia Beach, Virginia 23454

and

1005 Hampton Boulevard
Norfolk, Virginia 23507

Private hospitals for the treatment of psychiatric disorders of adults and adolescents, alcoholism, and drug addiction. Residential special education for emotionally disturbed adolescents.

David C. Butler
Administrator

Julian W. Selig, Jr., M.D.
Hospital Director, Norfolk

Stuart Ashman, M.D.
Hospital Director, Virginia Beach

(Brochure sent on request)

Fourth Decade of Nursing

Accredited by the Joint Commission on Accreditation and Certified for Medicare

MRS. PLYLER'S NURSING HOME

KATE E. PLYLER (1876-1947)

GENE CLARK REGIRER (1912-1962)

A private nursing home dedicated to extended, intermediate and custodial care

1615 Grove Avenue, Richmond, Virginia, Telephone 353-3981

ANNOUNCING THE OPENING OF

THE WADDELL CENTER

for Alcohol and Related Problems

112 Painter Street 703 236-2994

GALAX, VIRGINIA 24333

Walter K. Helton, M.Div., Director

- Twenty-Eight day residential program
- Services for men & women
- Detoxification available
- Telephone consultation encouraged
- Quiet neighborhood on the rim of the Blue Ridge

For the Discriminating Eye Physician

Depend on the Services of a Guild Optician

IN LYNCHBURG, VA.

A. G. JEFFERSON

INC.

Main Office
Allied Arts Buildings

Branch Office
2010 Tate Springs Road

REGISTERED OPTICIANS

WE DO NOT PRESCRIBE GLASSES—
WE MAKE THEM

'CIRCUBID'™

(Ethaverine HCl–150 mg.)

Time Disintegrating Capsules

Caution: Federal law prohibits dispensing without prescription.

Each Capsule* contains: Ethaverine HCl. 150 mg.

ACTION: Ethaverine HCl. acts directly on the smooth muscle cells without involving the autonomic nervous system or its receptors.

INDICATIONS: In peripheral and cerebral vascular insufficiency associated with arterial spasm, in spastic conditions of the gastro-intestinal and genitourinary tracts.

CONTRAINDICATIONS: Contraindicated in the presence of complete atrioventricular dissociation.

PRECAUTIONS: It should be administered with caution in patients with glaucoma. It should not be used in pregnant women or in women of childbearing age unless directed by a physician.

ADVERSE REACTIONS: Even though the incidence of side effects as reported in literature is very low, it is possible for a patient to evidence nausea, anorexia, abdominal distress, dryness of the throat, hypotension, flushing, sweating, vertigo, respiratory depression, cardiac depression, cardiac arrhythmia and headache. If these side effects occur, reduce dosage or discontinue medication.

DOSAGE: The usual adult dose is 300 mg. daily, one capsule every 12 hours. In more difficult cases the dosage may be increased to 600 mg. daily as determined by the physician. It is most effective given early in the course of the vascular disorder. Because of the chronic nature of the disease long term therapy is required.

*Manufactured to provide a prolonged therapeutic effect.

HOW SUPPLIED: Bottles of 100 and 1000

W. F. MERCHANT
PHARMACEUTICAL CO., INC.
Warrenton, Virginia 22186

'CIRCUBID'™
(Ethaverine HCl)
150 mg. Capsules

W.F. MERCHANT PHARMACEUTICAL CO., INC.
4 SOUTH THIRD ST. • P. O. BOX 527 • WARRENTON, VIRGINIA 22186

A resource for therapies, including a school for emotionally disturbed children

The Human Resource Institute of Norfolk offers individualized treatment programs within a therapeutic community to all ages and diagnostic categories of mentally and emotionally disturbed adults, adolescents, and children. By utilizing various individual and group therapies the patient becomes aware of his own feelings and his relationship to others. The diversified therapies increase the individual's self-esteem and encourage him to function in an effective manner.

An intensive program of community activities offered through the Creative Services Department promotes interpersonal relationships among patients and staff, and stimulates the patient's creative potential. Activities such as dance therapy, recreational therapy, occupational therapy, psychodrama, music therapy, and personal appearance therapy are individualized according to the patient's needs.

An integral part of treatment for the emotionally disturbed adolescent or child is the continuance of his education in a therapeutically controlled environment. HUMAN RESOURCE ACADEMY, a fully licensed and certified school, promotes learning with teachers specially trained in teaching the emotionally disturbed and learning disabled students.

Pharmaceutical therapy and close association with consultant physicians of all specialities are important aspects of patient care at Human Resource Institute.

To find out more about our comprehensive program contact the Co-Medical Directors, Dietrich W. Heyder, M.D., F.A.P.A., or Fathy A. Abdou, M.D., F.A.P.A., Human Resource Institute of Norfolk, Human Resources Building, 100 Kingsley Lane, Norfolk, Virginia 23505. Phone (804) 489-1072.

HE'S STUCK BY YOU FOR YEARS. CAN YOU TAKE A CHANCE ON HIS RETIREMENT?

He's more than a name on a payroll check. He's been a friend and willing worker since way back when.

But now he's getting on toward retirement age. And what can you tell him he can look forward to then?

If you do not have a retirement trust fund or if your trust fund is being managed by amateurs, he's in for a big letdown on his retirement day.

And so are you.

You can avoid a lot of embarrassment by transferring the responsibility for investment management to our trust department. That way you can count on VNB's investment skills and know-how to be sure your friend gets the rewards he deserves.

But don't think this means meager returns. We'll be glad to furnish illustrations of how we invest and what our record has been.

So why not get together with us and your attorney to work out something for your loyal workers and yourself. Which, by the way, can help you recruit the right people to replace them when they're gone.

VNB TRUST DEPARTMENT.

VIRGINIA NATIONAL BANK

Virginia has a romantic past. And lots of mementos to prove it.

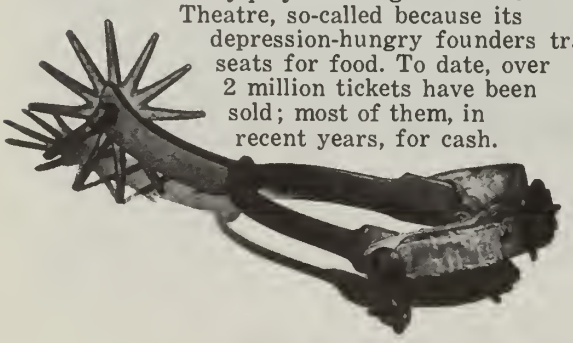
Woodrow Wilson Slept Here. At Staunton's stately "Manse", you can see the crib that held a future president. And the home where Jessie Wilson gave birth to the son who later gave birth to the League of Nations with its vision of world-wide peace.

The General's Assembly. Douglas MacArthur called Norfolk home, though he was born in Arkansas ("while his parents were away", the Norfolk paper said). Here, at the MacArthur Memorial, you can see the possessions of this great soldier.

The Doll Who Spied For Dixie. She had a head for smuggling. Hollow. Just right for carrying medicines across Union lines. She's at Richmond's Confederate Museum now. In retirement.

The Mighty In Miniature. These water color miniatures of the first President and his lady, painted from life, are now on view in Williamsburg. Come see them.

Broadway In The Blue Ridge. These spurs were worn in an early play at Abingdon's Barter Theatre, so-called because its depression-hungry founders traded seats for food. To date, over 2 million tickets have been sold; most of them, in recent years, for cash.



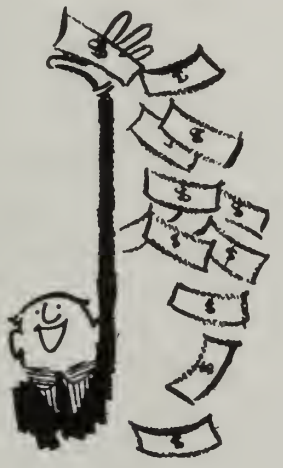
Visit, write or call
VIRGINIA STATE TRAVEL SERVICE
9th & Grace Streets, Richmond 23219
phone: (703) 770-4484

This advertisement is published by Virginia Medical Monthly as a Public Service.

OVER $1,000,000 IN BENEFITS PAID TO THE MEDICAL SOCIETY OF VIRGINIA MEMBERS

Long-Term Disability Insurance At Low Group Rates

A Doctor's earned income can stop when he is **SICK** or **HURT** and **CAN'T WORK**. Long-term disability insurance could provide the needed **CASH** when this happens.



Here are a few of the outstanding features of this plan:

1. Lifetime accident benefits
2. Sickness benefits for up to seven years or to age 65
3. **UNIQUE** definition of disability (7 year benefit period if sickness prevents you from engaging in your specialty)
4. Confinement not required for disability benefits
5. Federal income tax-free benefits

ALSO

As a participant in this plan you receive:

1. Special low group rates
2. Convenient local claim service

Interested? To find out more, simply return the coupon below to the administrator nearest you.

THE PRICE OF A STAMP MAY ALSO BUY YOU PEACE OF MIND

Murphy Insurance & Travel
108 2nd St., S. E.
Charlottesville, Virginia 22901
295-4157

Ernest L. Baker Associates
Suite 1118
205 34th Street
Virginia Beach, Va. 23451
425-1892

Suter Associates, Inc.
2425 Wilson Blvd.
Arlington, Virginia 22201
525-6700

G. C. French Agency, Inc.
1004 North Thompson Street
Richmond, Virginia 23230
358-7141

General Insurance of Roanoke
Shenandoah Building
Roanoke, Virginia 24011
345-8148

I would like more information about the Long-term Group Disability Insurance sponsored by The Medical Society of Virginia.

Name ..... Phone .....

Address .....

City .....State ..... Zip.....

OFFICERS AND COUNCILORS OF THE MEDICAL SOCIETY OF VIRGINIA 1974-1975

President: William R. Hill, M.D., Richmond *President-Elect:* Raymond S. Brown, M.D., Gloucester
Past-President: John A. Martin, M.D., Roanoke
Vice-Presidents: 1st: Anthony J. Munoz, M.D., Farmville 2nd: Duncan S. Owen, Jr., M.D., Richmond
3rd: George S. Mitchell, Jr., M.D., Newport News

Executive Vice-President: Robert I. Howard, Richmond
State Commissioner of Health: Mack I. Shanholtz, M.D., Richmond
Editor, Va. Medical Monthly: Harry J. Warthen, M.D., Richmond
Speaker of the House: William J. Hagood, Jr., M.D., Clover
Vice-Speaker: K. K. Wallace, Jr., M.D., Virginia Beach

COUNCILORS	(District)	VICE-COUNCILORS
Harold L. Williams, M.D., Newport News	1st	William Stewart Burton, M.D., Nassawadox
Charles E. Davis, Jr., M.D., Norfolk	2nd	Gervas S. Taylor, Jr., M.D., Norfolk
Carrington Williams, Jr., M.D., Richmond	3rd	Charles M. Caravati, Jr., M.D., Richmond
Gordon G. Birdsong, M.D., Franklin	4th	Henry M. Snell, M.D., Petersburg
Girard V. Thompson, Sr., M.D., Chatham	5th	Russell E. Herring, Jr., M.D., Martinsville
H. C. Alexander, III, M.D., Roanoke	6th	Thomas L. Gorsuch, M.D., Waynesboro
George M. Nipe, M.D., Harrisonburg	7th	Harry L. Westfall, Jr., M.D., Fredericksburg
Harry C. Kuykendall, M.D., Alexandria	8th	Nicholas G. Colletti, M.D., Woodbridge
James Hal Smith, M.D., Christiansburg	9th	J. William Giesen, M.D., Radford
W. Leonard Weyl, M.D., Arlington	10th	Richard L. Fields, M.D., Fairfax

DELEGATES AND ALTERNATES TO AMERICAN MEDICAL ASSOCIATION

Delegates: 1974-1975

William S. Hotchkiss, M.D., Norfolk
Michael A. Puzak, M.D., Arlington

1975-1976

F. Ashton Carmines, M.D., Newport News

Alternates: 1974-1975

John A. Martin, M.D., Roanoke
Carl E. Stark, M.D., Wytheville

1975-1976

Percy Wootton, M.D., Richmond

INDEX TO ADVERTISERS

Appleton-Century-Croft ---- 1020
Bayberry Psychiatric Hospital ---- 1093
Burroughs-Wellcome ---- 1019
Commercial Insurance ---- 1103
Commonwealth Psychiatric Center ---- 1094
David Dyer Ins. ---- 1017
Dorsey Laboratories ---- 1018, 1029
Human Resources Institute of Norfolk ---- 1100
Jefferson, A. G. ---- 1098
Johnston-Willis Hospital ---- 1092
Eli Lilly and Co. ---- 1030
W. F. Merchant Pharmaceutical Co. ---- 1098, 1099
Oriental Rugs ---- 1028
People's Service Drug Stores ---- 1026
Pharmaceutical Manufacturers Assn. ---- 1024-1025
Plyler's Nursing Home, Mrs. ---- 1097
Poythress, Wm. P. ---- 1021
Pulaski Home ---- 1092
Retirement Plan ---- 1027
Roche Laboratories ---- 2nd Cover, 1015, 3rd and 4th Covers
Saint Alban's Psychiatric Hospital ---- 1096
St. Luke's Hospital ---- 1095
Stanmar, Inc. ---- 1022
Stuart Circle Hospital ---- 1093
Tidewater Psychiatric Institute ---- 1097
Tucker Hospital, Inc. ---- 1096
U. S. Air Force Medical Service ---- 1092
Virginia National Bank ---- 1101
Virginia Travel Service ---- 1102
Waddell Center ---- 1098
Wallace Pharmaceuticals ---- 1022-1023
Westbrook Psychiatric Hospital ---- 1095
Williams Printing Company ---- 1027